

Open Source Used In talos_crawl-service-go main-git-db41a29-341

Cisco Systems, Inc.
www.cisco.com

Cisco has more than 200 offices worldwide.
Addresses, phone numbers, and fax numbers
are listed on the Cisco website at
www.cisco.com/go/offices.

Text Part Number: 78EE117C99-2609470649

This document contains licenses and notices for open source software used in this product. With respect to the free/open source software listed in this document, if you have any questions or wish to receive a copy of any source code to which you may be entitled under the applicable free/open source license(s) (such as the GNU Lesser/General Public License), please submit this form.

In your requests please include the following reference number 78EE117C99-2609470649

Contents

1.1 golang 1.25.0
1.1.1 Available under license
1.2 utmps-libs 0.1.2.3-r2
1.2.1 Available under license
1.3 ncurses 6.5_p20241006-r3
1.3.1 Available under license
1.4 aws-sdk-go-v2 1.38.3
1.4.1 Available under license
1.5 v8 12.4.254.21
1.5.1 Available under license
1.6 icu 74.2-r1
1.6.1 Available under license
1.7 goautoneg 0.0.0-20191010083416-a7dc8b61c822
1.7.1 Available under license
1.8 aws-sdk-go-v2-service-sts 1.38.2
1.8.1 Available under license
1.9 aws-sdk-go-v2-feature-dynamodb-attributevalue 1.20.9
1.9.1 Available under license
1.10 alpine-keys 2.5-r0
1.10.1 Available under license
1.11 stack 1.8.1
1.11.1 Available under license
1.12 github.com/aws/aws-sdk-go-v2/service/s3 1.87.3
1.12.1 Available under license
1.13 shadow 4.16.0-r1
1.13.1 Available under license

1.14 github.com/aws/aws-sdk-go-v2/service/ssooidc 1.34.2
1.14.1 Available under license
1.15 node.js 22.15.1-r0
1.15.1 Available under license
1.16 pcre2 10.43-r0
1.16.1 Available under license
1.17 perks 1.0.1
1.17.1 Available under license
1.18 protobuf 1.36.8
1.18.1 Available under license
1.19 github.com/aws/aws-sdk-go-v2/service/internal/endpoint-discovery 1.11.6
1.19.1 Available under license
1.20 sqlite 3.48.0-r3
1.20.1 Available under license
1.21 github.com/aws/aws-sdk-go-v2/service/dynamodbstreams 1.30.2
1.21.1 Available under license
1.22 github.com/aws/aws-sdk-go-v2/service/internal/checksum 1.8.6
1.22.1 Available under license
1.23 aws-sdk-go-v2-feature-ec2-imds 1.18.6
1.23.1 Available under license
1.24 github.com/aws/smithy-go 1.23.0
1.24.1 Available under license
1.25 scanelf 1.3.8-r1
1.25.1 Available under license
1.26 aws-sdk-go-v2-service-internal-checksum 1.8.6
1.26.1 Available under license
1.27 aws-sdk-go-v2-internal-ini 1.8.3
1.27.1 Available under license
1.28 utmps 0.1.2.3-r2
1.28.1 Available under license
1.29 libintl 0.22.5-r0
1.29.1 Available under license
1.30 github.com/deckarep/golang-set/v2 2.8.0
1.30.1 Available under license
1.31 github.com/aws/aws-sdk-go-v2/service/sso 1.29.1
1.31.1 Available under license
1.32 libcap 2.71-r0
1.32.1 Available under license
1.33 logrus 1.9.3

1.33.1 Available under license
1.34 libssl3 3.3.4-r0
1.34.1 Available under license
1.35 xxhash 2.3.0
1.35.1 Available under license
1.36 xz 5.6.3-r1
1.36.1 Available under license
1.37 aws-sdk-go-v2-config 1.31.6
1.37.1 Available under license
1.38 simdjson 3.10.1-r0
1.38.1 Available under license
1.39 pam 1.6.1-r1
1.39.1 Available under license
1.40 glib 2.82.5-r0
1.40.1 Available under license
1.41 aws-sdk-go-v2-internal-v4a 1.4.6
1.41.1 Available under license
1.42 aws-sdk-go-v2-service-s3 1.87.3
1.42.1 Available under license
1.43 xz-libs 5.6.3-r1
1.43.1 Available under license
1.44 go-jose 3.0.4
1.44.1 Available under license
1.45 vimeo-go-magic 1.0.0
1.45.1 Available under license
1.46 libxml2 2.13.4-r6
1.46.1 Available under license
1.47 apk-tools 2.14.6-r3
1.47.1 Available under license
1.48 github.com/aws/aws-sdk-go-v2/config 1.31.6
1.48.1 Available under license
1.49 ada-libs 2.9.2-r1
1.49.1 Available under license
1.50 libffi 3.4.7-r0
1.50.1 Available under license
1.51 aws-sdk-go-v2-feature-s3-manager 1.19.4
1.51.1 Available under license
1.52 libstdc++ 14.2.0-r4
1.52.1 Available under license

1.53 github.com/aws/aws-sdk-go-v2/service/internal/accept-encoding 1.13.1
1.53.1 Available under license
1.54 aws-sdk-go-v2-internal-endpoints 2.7.6
1.54.1 Available under license
1.55 util-linux 2.40.4-r1
1.55.1 Available under license
1.56 aws-sdk-go-v2-service-dynamodb 1.50.1
1.56.1 Available under license
1.57 github.com/go-jose/go-jose/v3 3.0.4
1.57.1 Available under license
1.58 c-ares 1.34.5-r0
1.58.1 Available under license
1.59 aws-sdk-go-v2-service-sso 1.29.1
1.59.1 Available under license
1.60 libeconf 0.6.3-r0
1.60.1 Available under license
1.61 readline 8.2.13-r0
1.61.1 Available under license
1.62 github.com/playwright-community/playwright-go 0.5200.0
1.62.1 Available under license
1.63 skalibs 2.14.3.0-r0
1.63.1 Available under license
1.64 iputils-clockdiff 20240905-r0
1.64.1 Available under license
1.65 iputils-arping 20240905-r0
1.65.1 Available under license
1.66 aws-sdk-go-v2-aws-protocol-eventstream 1.7.1
1.66.1 Available under license
1.67 zstd 1.3.1
1.67.1 Available under license
1.68 github.com/aws/aws-sdk-go-v2/feature/s3/manager 1.19.4
1.68.1 Available under license
1.69 kelseyhightower-envconfig 1.4.0
1.69.1 Available under license
1.70 file 5.46-r2
1.70.1 Available under license
1.71 libbsd 0.12.2-r0
1.71.1 Available under license
1.72 github.com/aws/aws-sdk-go-v2/credentials 1.18.10

1.72.1 Available under license
1.73 google-uuid 1.6.0
1.73.1 Available under license
1.74 x-text 0.28.0
1.74.1 Available under license
1.75 aws-sdk-go-v2-service-ssooidc 1.34.2
1.75.1 Available under license
1.76 aws-sdk-go-v2-service-internal-presigned-url 1.13.6
1.76.1 Available under license
1.77 brotli 1.1.0-r2
1.77.1 Available under license
1.78 github.com/aws/aws-sdk-go-v2/internal/ini 1.8.3
1.78.1 Available under license
1.79 shared-mime-info 2.4-r2
1.79.1 Available under license
1.80 cpp 14.2.0-r4
1.80.1 Available under license
1.81 aws-sdk-go-v2-service-dynamodbstreams 1.30.2
1.81.1 Available under license
1.82 brotli 1.2.0
1.82.1 Available under license
1.83 busybox 1.37.0-r13
1.83.1 Available under license
1.84 musl 1.2.5-r9
1.84.1 Available under license
1.85 libuv 1.49.2
1.85.1 Available under license
1.86 klauspost-compress 1.18.0
1.86.1 Available under license
1.87 pax-utils 1.3.8-r1
1.87.1 Available under license
1.88 aws-sdk-go-v2-service-internal-s3shared 1.19.6
1.88.1 Available under license
1.89 libgcc 14.2.0-r4
1.89.1 Available under license
1.90 musl-dev 1.2.5-r9
1.90.1 Available under license
1.91 golang-set 2.8.0
1.91.1 Available under license

1.92 simdutf 5.6.3-r0
1.92.1 Available under license
1.93 github.com/vimeo/go-magic 1.0.0
1.93.1 Available under license
1.94 iputils-ping 20240905-r0
1.94.1 Available under license
1.95 icu-data-en 74.2-r1
1.95.1 Available under license
1.96 nghttp2 1.64.0-r0
1.96.1 Available under license
1.97 libmagic 5.46-r2
1.97.1 Available under license
1.98 aws-sdk-go-v2-credentials 1.18.10
1.98.1 Available under license
1.99 tre 0.8.0-r2
1.99.1 Available under license
1.100 procfs 0.17.0
1.100.1 Available under license
1.101 pkgconf 2.3.0-r0
1.101.1 Available under license
1.102 pcre 8.45-r3
1.102.1 Available under license
1.103 github.com/aws/aws-sdk-go-v2/service/internal/presigned-url 1.13.6
1.103.1 Available under license
1.104 aws-sdk-go-v2-internal-configsources 1.4.6
1.104.1 Available under license
1.105 alpine-baselayout-data 3.6.8-r1
1.105.1 Available under license
1.106 prometheus-client-model 0.6.2
1.106.1 Available under license
1.107 x-net 0.43.0
1.107.1 Available under license
1.108 libmd 1.1.0-r0
1.108.1 Available under license
1.109 github.com/aws/aws-sdk-go-v2/feature/ec2/imds 1.18.6
1.109.1 Available under license
1.110 x-sys 0.35.0
1.110.1 Available under license
1.111 prometheus-common 0.65.0

1.111.1 Available under license
1.112 go-jose-go-jose 3.0.4
1.112.1 Available under license
1.113 prometheus-client 1.23.0
1.113.1 Available under license
1.114 ssl-client 1.37.0-r13
1.114.1 Available under license
1.115 aws-sdk-go-v2-service-internal-accept-encoding 1.13.1
1.115.1 Available under license
1.116 iputils-tracepath 20240905-r0
1.116.1 Available under license
1.117 github.com/aws/aws-sdk-go-v2/internal/configsources 1.4.6
1.117.1 Available under license
1.118 stdlib go1.25.0
1.118.1 Available under license
1.119 github.com/aws/aws-sdk-go-v2/feature/dynamodb/attributevalue 1.20.9
1.119.1 Available under license
1.120 compress 1.18.0
1.120.1 Available under license
1.121 martian 3.3.3
1.121.1 Available under license
1.122 github.com/aws/aws-sdk-go-v2/service/sts 1.38.2
1.122.1 Available under license
1.123 openssl 3.3.4-r0
1.123.1 Available under license
1.124 alpine-release 3.21.4-r0
1.124.1 Available under license
1.125 github.com/aws/aws-sdk-go-v2/internal/v4a 1.4.6
1.125.1 Available under license
1.126 gobject-introspection 1.82.0-r2
1.126.1 Available under license
1.127 github.com/aws/aws-sdk-go-v2/aws/protocol/eventstream 1.7.1
1.127.1 Available under license
1.128 alpine-baselayout 3.6.8-r1
1.128.1 Available under license
1.129 libncursesw 6.5_p20241006-r3
1.129.1 Available under license
1.130 github.com/aws/aws-sdk-go-v2/service/dynamodb 1.50.1
1.130.1 Available under license

1.131 icu-libs 74.2-r1
1.131.1 Available under license
1.132 clientmodel 0.6.2
1.132.1 Available under license
1.133 playwright-community-playwright-go 0.5200.0
1.133.1 Available under license
1.134 github.com/aws/aws-sdk-go-v2/service/internal/s3shared 1.19.6
1.134.1 Available under license
1.135 musl-utils 1.2.5-r9
1.135.1 Available under license
1.136 ca-certificates 20250619-r0
1.136.1 Available under license
1.137 libcrypto3 3.3.4-r0
1.137.1 Notifications
1.137.2 Available under license
1.138 github.com/aws/aws-sdk-go-v2/internal/endpoints/v2 2.7.6
1.138.1 Available under license
1.139 skalibs-libs 2.14.3.0-r0
1.139.1 Available under license
1.140 busybox 1.37.0-r14
1.140.1 Available under license
1.141 ada 2.9.2-r1
1.141.1 Available under license
1.142 bash 5.2.37-r0
1.142.1 Available under license
1.143 common 0.65.0
1.143.1 Available under license
1.144 aws-sdk-go-v2-service-internal-endpoint-discovery 1.11.6
1.144.1 Available under license
1.145 gettext 0.22.5-r0
1.145.1 Available under license
1.146 smithy-go 1.23.0
1.146.1 Available under license
1.147 github.com/google/uuid 1.6.0
1.147.1 Available under license
1.148 ca-certificates-bundle 20250619-r0
1.148.1 Available under license
1.149 alpine-base 3.21.4-r0
1.149.1 Available under license

1.150 libmount 2.40.4-r1
1.150.1 Available under license
1.151 zlib 1.3.1-r2
1.151.1 Available under license
1.152 protobuf-go 1.36.8
1.152.1 Available under license
1.153 iputils 20240905-r0
1.153.1 Available under license
1.154 sirupsen-logrus 1.9.3
1.154.1 Available under license

1.1 golang 1.25.0

1.1.1 Available under license :

```
// Copyright 2024 The Go Authors. All rights reserved.
// Use of this source code is governed by a BSD-style
// license that can be found in the LICENSE file.

package copyright

import (
 "bytes"
 "internal/testenv"
 "io"
 "io/fs"
 "os"
 "path/filepath"
 "testing"
)

var copyright = []byte("Copyright")

var permitted = [][]byte{
 []byte("// Code generated by "),
 []byte("// Code generated from "),
 []byte("// Created by cgo -cdefs"),
 []byte("// DO NOT EDIT\n// generated by:"),
 []byte("// Empty assembly file"),
 []byte("// Generated using cgo"),
 []byte("// Original source:\n//\thttp://www.zorinaq.com/papers/md5-amd64.html"), // public domain crypto/md5
 []byte("// created by cgo -cdefs"),
 []byte("// go run mkasm.go"),
 []byte("// mkerrors"),
 []byte("// mksys"),
 []byte("// run\n// Code generated by"), // cmd/compile/internal/test/constFold_test.go
```

```
}

func TestCopyright(t *testing.T) {
 buf := make([]byte, 2048)
 filepath.WalkDir(filepath.Join(testenv.GOROOT(t), "src"), func(path string,
 d fs.DirEntry, err error) error {
  if d.IsDir() && (d.Name() == "testdata" || d.Name() == "vendor") {
   return filepath.SkipDir
  }
  switch filepath.Ext(d.Name()) {
  default:
   return nil
  case ".s", ".go":
   // check
  }

  f, err := os.Open(path)
  if err != nil {
   t.Error(err)
   return nil
  }
  defer f.Close()
  n, err := f.Read(buf)
  if err != nil && err != io.EOF {
   t.Error(err)
   return nil
  }
  b := buf[:n]
  if bytes.Contains(b, copyright) {
   return nil
  }
  for _, ok := range permitted {
   if bytes.HasPrefix(b, ok) {
    return nil
   }
  }
  t.Errorf("%s: missing copyright notice", path)
  return nil
 })
}
```

Copyright 2009 The Go Authors.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google LLC nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
The Go source code and supporting files in this directory
are covered by the usual Go license (see ../../../../LICENSE).

When building with GOEXPERIMENT=boringcrypto, the following applies.

The goboringcrypto_linux_amd64.syso object file is built
from BoringSSL source code by build/build.sh and is covered
by the BoringSSL license reproduced below and also at
https://boringssl.googlesource.com/boringssl/+/fips-20220613/LICENSE.

BoringSSL is a fork of OpenSSL. As such, large parts of it fall under OpenSSL
licensing. Files that are completely new have a Google copyright and an ISC
license. This license is reproduced at the bottom of this file.

Contributors to BoringSSL are required to follow the CLA rules for Chromium:
https://cla.developers.google.com/clas

Some files from Intel are under yet another license, which is also included
underneath.

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the
OpenSSL License and the original SSLeay license apply to the toolkit.
See below
for the actual license texts. Actually both licenses are BSD-style Open Source
licenses. In case of any license issues related to OpenSSL please contact
openssl-core@openssl.org.

The following are Google-internal bug numbers where explicit permission from

some authors is recorded for use of their work. (This is purely for our own
record keeping.)
27287199
27287880
27287883

OpenSSL License

/* ==
* Copyright (c) 1998-2011 The OpenSSL Project. All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
*
* 1. Redistributions of source code must retain the above copyright
*   notice, this list of conditions and the following disclaimer.
*
* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following
disclaimer in
*   the documentation and/or other materials provided with the
*   distribution.
*
* 3. All advertising materials mentioning features or use of this
*   software must display the following acknowledgment:
*   "This product includes software developed by the OpenSSL Project
*   for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
*
* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
*   endorse or promote products derived from this software without
*   prior written permission. For written permission, please contact
*   openssl-core@openssl.org.
*
* 5. Products derived from this software may not be called "OpenSSL"
*   nor may "OpenSSL" appear in their names without prior written
*   permission of the OpenSSL Project.
*
* 6. Redistributions of any form whatsoever must retain the following
*   acknowledgment:
*   "This product includes software developed by the OpenSSL Project
*   for use in the OpenSSL Toolkit
(http://www.openssl.org/)"
*
* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY
* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR

* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR
* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY OF SUCH DAMAGE.
* ==
*
* This product includes cryptographic software written by Eric Young
* (eay@cryptsoft.com). This product
 includes software written by Tim
* Hudson (tjh@cryptsoft.com).
*
*/

Original SSLeay License

/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
* All rights reserved.
*
* This package is an SSL implementation written
* by Eric Young (eay@cryptsoft.com).
* The implementation was written so as to conform with Netscapes SSL.
*
* This library is free for commercial and non-commercial use as long as
* the following conditions are aheared to. The following conditions
* apply to all code found in this distribution, be it the RC4, RSA,
* lhash, DES, etc., code; not just the SSL code. The SSL documentation
* included with this distribution is covered by the same copyright terms
* except that the holder is Tim Hudson (tjh@cryptsoft.com).
*
* Copyright remains Eric Young's, and as such any Copyright notices in
* the code are not to be removed.
* If this package is used in a product, Eric Young should be given attribution
* as the author of
 the parts of the library used.
* This can be in the form of a textual message at program startup or
* in documentation (online or textual) provided with the package.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the copyright
*   notice, this list of conditions and the following disclaimer.

* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following disclaimer in the
*   documentation and/or other materials provided with the distribution.
* 3. All advertising materials mentioning features or use of this software
*   must display the following acknowledgement:
*   "This product includes cryptographic software written by
*   Eric Young (eay@cryptsoft.com)"
*   The word 'cryptographic' can be left out if the rouines from the library
*   being used are
 not cryptographic related :-).
* 4. If you include any Windows specific code (or a derivative thereof) from
*   the apps directory (application code) you must include an acknowledgement:
*   "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
*
* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
 POSSIBILITY OF
* SUCH DAMAGE.
*
* The licence and distribution terms for any publically available version or
* derivative of this code cannot be changed. i.e. this code cannot simply be
* copied and put under another distribution licence
* [including the GNU Public Licence.]
*/

ISC license used for completely new code in BoringSSL:

/* Copyright (c) 2015, Google Inc.
*
* Permission to use, copy, modify, and/or distribute this software for any
* purpose with or without fee is hereby granted, provided that the above
* copyright notice and this permission notice appear in all copies.
*
* THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
* WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
* MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
* SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
* WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION
* OF CONTRACT, NEGLIGENCE

OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
* CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE. */

Some files from Intel carry the following license:

Copyright (c) 2012, Intel Corporation
#
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:
#
* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
#
* Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the
distribution.
#
* Neither the name of the Intel Corporation nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.
#
#
THIS SOFTWARE IS PROVIDED BY INTEL CORPORATION
 ""AS IS"" AND ANY
EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL INTEL CORPORATION OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR
PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
People who have agreed to one of the CLAs and can contribute patches.
The AUTHORS file lists the copyright holders; this file
lists people. For example, Google employees are listed here
but not in AUTHORS, because Google holds the copyright.
#
https://developers.google.com/open-source/cla/individual
https://developers.google.com/open-source/cla/corporate
#
Names should be added to this file as:

Name <email address>
Raul Silvera <rsilvera@google.com>
Tipp Moseley <tipp@google.com>
Hyoun Kyu Cho <netforce@google.com>
Martin Spier <spiermar@gmail.com>
Taco de Wolff <tacodewolff@gmail.com>
Andrew Hunter <andrewhhunter@gmail.com>
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by

the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but

excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the

appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Copyright (c) 2015 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Copyright 2015 The Go Authors.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google LLC nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright 2009-2017 Andrea Leofreddi <a.leofreddi@vleo.net>. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY
AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL COPYRIGHT HOLDERS OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF
ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The views and conclusions contained in the software and documentation are those of the authors and should not be interpreted as representing official policies, either expressed or implied, of Andrea Leofreddi.

1.2 utmps-libs 0.1.2.3-r2

1.2.1 Available under license :

Copyright (c) 2018-2024 Laurent Bercot <ska-skaware@skarnet.org>

Permission to use, copy, modify, and distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

1.3 ncurses 6.5_p20241006-r3

1.3.1 Available under license :

Upstream source https://invisible-island.net/ncurses/ncurses-examples.html

Current ncurses maintainer: Thomas Dickey <dickey@invisible-island.net>

Files: *
Copyright: 2017-2020,2021 Thomas E. Dickey
Copyright: 1998-2016,2017 Free Software Foundation, Inc.
Licence: X11

Files: aclocal.m4 package
Copyright: 2003-2019,2020 by Thomas E. Dickey
Licence: X11

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, distribute with modifications, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS

OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE ABOVE COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR
THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name(s) of the above copyright
holders shall not be used in advertising or otherwise to promote the
sale, use or other dealings in this Software without prior written
authorization.

Files: install-sh
Copyright: 1994 X Consortium
Licence: X11

Permission is hereby granted, free of charge, to any person obtaining
a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
X CONSORTIUM BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN
AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNEC-
TION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of the X Consortium shall not
be used in advertising or otherwise to promote the sale, use or other deal-
ings in this Software without prior written authorization from the X Consor-
tium.

FSF changes to this file are in the public domain.

Calling this script install-sh is preferred over install.sh, to prevent
`make' implicit rules from creating a file called install from it
when there is no Makefile.

This script is compatible with the BSD install script, but was written
from scratch. It can only install one file at a time, a restriction

shared with many OS's install programs.

On Debian systems, the complete text of the GNU General
Public License can be found in '/usr/share/common-licenses/GPL-2'

-- vile: txtmode file-encoding=utf-8
Upstream source https://invisible-island.net/ncurses/ncurses.html
This package is used for testing builds of ncurses.

Current ncurses maintainer: Thomas Dickey <dickey@invisible-island.net>

Files: *
Copyright: 2017-2020,2021 by Thomas E. Dickey
Copyright: 1998-2016,2017 Free Software Foundation, Inc.
Licence: X11

Files: aclocal.m4 package
Copyright: 1996-2020,2021 by Thomas E. Dickey
Licence: X11

Files: doc/html/NCURSES-Programming-HOWTO.html
Copyright: 2001 by Pradeep Padala
Licence: X11

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, distribute with modifications, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software
is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE ABOVE COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR
THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name(s) of the above copyright
holders shall not be used in advertising or otherwise to promote the
sale, use or other dealings in this Software without prior written

authorization.

Files:
install-sh
Copyright: 1994 X Consortium
Licence: X11

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
X CONSORTIUM BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN
AN ACTION OF
CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNEC-
TION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of the X Consortium shall not
be used in advertising or otherwise to promote the sale, use or other deal-
ings in this Software without prior written authorization from the X Consor-
tium.

Files: progs/tset.c ncurses/tinfo/read_termcap.c
Copyright: 1980,1991,1992,1993 The Regents of the University of California.
License: BSD

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
notice, this list
of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. Neither the name of the University nor the names of its contributors
may be used to endorse or promote products derived from this software
without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

-- vile: txtmode file-encoding=utf-8
Copyright 2018-2020,2021 Thomas E. Dickey
Copyright 1998-2017,2018 Free Software Foundation, Inc.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, distribute with modifications, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE ABOVE COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER
IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR
THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name(s) of the above copyright
holders shall not be used in advertising or otherwise to promote the
sale, use or other dealings in this Software without prior written
authorization.

-- vile:txtmode fc=72
-- $Id: COPYING,v 1.10 2021/01/01 09:54:30 tom Exp $
Upstream source https://invisible-island.net/ncurses/Ada95.html

Current ncurses maintainer: Thomas Dickey <dickey@invisible-island.net>

Files: *
Copyright: 2017-2020,2021 by Thomas E. Dickey
Copyright: 1998-2016,2017 Free Software Foundation, Inc.
Licence: X11

Files: aclocal.m4 package
Copyright: 2010-2020,2021 by Thomas E. Dickey
Licence: X11

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, distribute with modifications, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included

in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE ABOVE COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name(s) of the above copyright holders shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization.

Files: install-sh
Copyright: 1994 X Consortium
Licence: X11

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE X CONSORTIUM BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except
as contained in this notice, the name of the X Consortium shall not
be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from the X Consortium.

FSF changes to this file are in the public domain.

Calling this script install-sh is preferred over install.sh, to prevent
`make' implicit rules from creating a file called install from it
when there is no Makefile.

This script is compatible with the BSD install script, but was written
from scratch. It can only install one file at a time, a restriction
shared with many OS's install programs.

On Debian systems, the complete text of the GNU General
Public License can be found in '/usr/share/common-licenses/GPL-2'

-- vile: txtmode file-encoding=utf-8
Upstream source https://invisible-island.net/ncurses/ncurses-examples.html

Current ncurses maintainer: Thomas Dickey <dickey@invisible-island.net>

Files: *
Copyright: 2017-2020,2021 Thomas E. Dickey
Copyright: 1998-2016,2017 Free Software Foundation, Inc.
Licence: X11

Files: aclocal.m4 package
Copyright: 2003-2020,2021 by Thomas E. Dickey
Licence: X11

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including

without limitation the rights to use, copy, modify, merge, publish,
distribute, distribute with modifications, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE ABOVE COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR
THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name(s) of the above copyright
holders shall not be used in advertising or otherwise to promote the
sale, use or other dealings in this Software without prior written
authorization.

Files: install-sh
Copyright: 1994 X Consortium
Licence: X11

Permission is hereby granted, free of charge, to any person obtaining
a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
X CONSORTIUM BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN
AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNEC-
TION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of the X Consortium shall not
be used in advertising or otherwise to promote the sale, use or other deal-
ings in this Software without prior written authorization from the X Consor-
tium.

FSF changes to this file are in the public domain.

Calling this script install-sh is preferred over install.sh, to prevent
`make' implicit rules from creating a file called install from it
when there is no Makefile.

This script is compatible with the BSD install script, but was written
from scratch. It can only install one file at a time, a restriction
shared with many OS's install programs.

On Debian systems, the complete text of the GNU General
Public License can be found in '/usr/share/common-licenses/GPL-2'

-- vile: txtmode file-encoding=utf-8

1.4 aws-sdk-go-v2 1.38.3

1.4.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry

```
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
```

```
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
       uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
```

```
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
```

```
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
```

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning

Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "SELF_MANAGED",
                "value": "SELF_MANAGED",
                "documentation": "SELF_MANAGED type of Active Directory"
              },
              {
                "name": "AWS_MANAGED",
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Arn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
{
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
```

```
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
```

```
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
```

```
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/DeregisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
             "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
     },
     "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
```

```
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

        }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
            "type": "structure",
            "members": {
                "Username": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                    }
                },
                "InstanceId": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                    }
                },
                "IdentityProvider": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                    "traits": {
                        "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                    }
                },
                "InstanceUserArn": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                    "traits": {
                        "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                    }
                },
                "Domain": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                    }
                }
            },
```

```
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
```

```
            },
            "Operation": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
               }
            },
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
         "type": "union",
         "members": {
            "ActiveDirectoryIdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
    "type": "list",
```

```
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
```

```
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },

      "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
          },
          "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
           "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

           "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
```

```
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
```

```
    {
      "fn": "isSet",
      "argv": [
        {
          "ref": "Endpoint"
        }
      ]
    }
  ],
 "rules": [
    {
      "conditions": [
        {
          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseFIPS"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [
        {

          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseDualStack"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [],
      "endpoint": {
        "url": {
          "ref": "Endpoint"
        },
```

```
        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "aws.partition",

                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseFIPS"
                                        },

true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
```

```
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

            ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
```

```
                                    "endpoint": {
                                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

    ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [

 {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "fn": "getAttr",
                                                "argv": [

                    {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsFIPS"
```

```
                                ]
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
```

```
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

            }
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

                        ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                        },
                        "type": "endpoint"
                    }
```

```
                    ],
                    "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ]
          },
          "smithy.rules#endpointTests": {
            "testCases": [
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "us-east-1",

        "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
```

```
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
```

```
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
```

```
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
```

```
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
          "expect": {
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true,
            "Endpoint": "https://example.com"
           }
        },
        {
          "documentation": "Missing region",
```

```
                    "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
        "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
```

```
            }
        },
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>"
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
```

```
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
              "value": "PROVISIONED",
              "documentation": ""
            },
            {
              "name": "DELETING",
              "value": "DELETING",
```

```
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
    "type": "structure",
     "members": {
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
            }
        },
        "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
            "smithy.api#required": {}
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
</li>\n        </ul>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
 {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
```

```
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
```

```
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{ResourceArn}"
           },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
```

```
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
```

```
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

         }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
```

```
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

          "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                  "smithy.api#required": {}
               }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
```

```
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
              }
```

```
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
```

```
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
                "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
      "members": {
        "RdsSalSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
```

```
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                    "smithy.api#required": {}
                }
            }
        },

        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
```

```
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
             "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
          }
        },
        "Product": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
          }
        },
        "ProductUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
          }
         }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                     "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
```

```
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
```

```
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
          }
        },
        "UpdateSettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
          "traits": {
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
      "type": "structure",
      "members": {
        "AddSubnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
            "smithy.api#required":
```

```
{}
                }
            },
            "RemoveSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
```

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}
```

```
type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
```

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
```

```
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
```

```
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
```

```
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
```

```
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string
```

```
 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
```

```
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
```

```
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType
```

```
// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
```

```
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
```

```
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
```

```
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
```

```
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
```

```
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
```

```
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
```

```
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
```

ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

```
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
```

```
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
```

```
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
```

```
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },

    {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
             }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
```

```
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
```

```
        "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
           }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
               "traits": {
                  "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
               }
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
         "type": "structure",
         "members": {
            "AmiId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
               }
            },
            "InstanceID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
               }
            },
            "InstanceType": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The instance type of the resource.</p>"
               }
            },
            "AccountID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
```

```
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

  "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager Linux Subscriptions",
                 "arnNamespace": "license-manager-linux-subscriptions",
                "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
```

```
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
```

```
      "Endpoint": {
        "builtIn": "SDK::Endpoint",
        "required": false,
        "documentation": "Override the endpoint used to send this request",
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }

],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
```

```
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"

          }
          ],
          "type": "tree"
        },
        {
          "conditions": [],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {

          "fn": "aws.partition",
                        "argv": [
                          {
                            "ref": "Region"
```

```
                }
            ],
            "assign": "PartitionResult"
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {

                    "ref": "UseFIPS"
                        },
                        true
                    ]
                },
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }

],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"

},
                                    "supportsFIPS"
                                ]
                            }
                        ]
                    },
```

```
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [

                                                     {
                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],

        "rules": [
                                                {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],

                                "type": "tree"
                                        }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
```

```
                                {

            "conditions": [
                                    {
                                       "fn": "booleanEquals",
                                       "argv": [
                                          {
                                             "ref": "UseFIPS"
                                          },
                                          true
                                       ]
                                    }
                                 ],
                                 "rules": [
                                    {
                                       "conditions": [
                                          {

                           "fn": "booleanEquals",
                                             "argv": [
                                                {
                                                   "fn": "getAttr",
                                                   "argv": [
                                                      {
                                                         "ref": "PartitionResult"
                                                      },
                                                      "supportsFIPS"
                                                   ]
                                                },
                                                true

                                          ]
                                       }
                                    ],
                                    "rules": [
                                       {
                                          "conditions": [],
                                          "rules": [
                                             {
                                                "conditions": [],
                                                "endpoint": {
                                                   "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                   "headers": {}
                                                },
                                                "type": "endpoint"
```

```
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "FIPS is enabled
but this partition does not support FIPS",
            "type": "error"
        }
    ],
    "type": "tree"
},
{
    "conditions": [
        {
            "fn": "booleanEquals",
            "argv": [
                {
                    "ref": "UseDualStack"
                },
                true

]
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                            "fn": "getAttr",
                            "argv": [
                                {

                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                            ]
                        }
                    ]
                }
```

```
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [

        {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                          "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
                      }
                    ],
                    "type": "tree"

                }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [],
                "endpoint": {
                  "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          }
        ],
```

```
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

  }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
```

```
                }
            },
            {
                "documentation": "Missing region",

            "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
          },
          {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
      "type": "structure",
      "members": {
        "SourceRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "OrganizationIntegration": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
          "traits": {
            "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Instances"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
          "type": "structure",
          "members": {
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
        <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
            <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
         "type": "structure",
```

```
        "members": {
            "Instances": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
```

```
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n        <p>The valid names for this filter are:</p>\n        <ul>\n <li>\n            <p>\n              <code>Subscription</code>\n            </p>\n          </li>\n        </ul>\n <p>The valid Operators for this filter are:</p>\n        <ul>\n          <li>\n            <p>\n <code>contains</code>\n            </p>\n          </li>\n          <li>\n            <p>\n <code>equals</code>\n            </p>\n          </li>\n          <li>\n            <p>\n        <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
```

```
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "RegisteredSubscriptionProviders"
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
         "type": "structure",
         "members": {
            "SubscriptionProviderSources": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
                  "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                  "smithy.api#range": {
                     "min": 1,
                     "max": 100
                  }
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
               }
            }
         },

         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
         "type": "structure",
         "members": {
            "RegisteredSubscriptionProviders": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
```

```
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
```

```
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

            "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
             },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
```

```
                "min": 1,
                "max": 100
            }
        }
    },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
        },
        "Type": {
            "target": "smithy.api#String",
            "traits": {

 "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
        },
        "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
        }
    },
```

```
        "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

     "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
```

```
                "value": "INVALID",
                "documentation": "INVALID status"
              },
              {
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
```

```
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
```

```
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
      "type": "structure",
```

```
    "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
 {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
```

```
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
```

```
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
             }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
```

```
            "smithy.api#error": "client"
          }
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step

spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.5 v8 12.4.254.21

1.5.1 Available under license :

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise

designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any

risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "{}"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright {yyyy} {name of copyright owner}

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

The << Software identified by reference to the Ecma Standard* (Software)>> is protected by copyright and is being

made available under the BSD License, included below. This Software may be subject to third party rights (rights from parties other than Ecma International), including patent rights, and no licenses under such third party rights are granted under this license even if the third party concerned is a member of Ecma International. SEE THE ECMA
CODE OF CONDUCT IN PATENT MATTERS AVAILABLE AT http://www.ecma-international.org/memento/codeofconduct.htm FOR
INFORMATION REGARDING THE LICENSING OF PATENT CLAIMS THAT ARE REQUIRED TO IMPLEMENT ECMA INTERNATIONAL STANDARDS*.

Copyright <<2012>> <<Ecma International>>
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following
   disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the
   following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the authors nor Ecma International may be used to endorse or promote products derived from
   this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE ECMA INTERNATIONAL "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT
SHALL ECMA INTERNATIONAL BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.

* Ecma International Standards hereafter means Ecma International Standards as well as Ecma Technical Reports
This license applies to all parts of V8 that are not externally
maintained libraries. The externally maintained libraries used by V8

are:

- PCRE test suite, located in
  test/mjsunit/third_party/regexp-pcre/regexp-pcre.js. This is based on the
  test suite from PCRE-7.3, which is copyrighted by the University
  of Cambridge and Google, Inc. The copyright notice and license
  are embedded in regexp-pcre.js.

- Layout tests, located in test/mjsunit/third_party/object-keys. These are
  based on layout tests from webkit.org which are copyrighted by
  Apple Computer, Inc. and released under a 3-clause BSD license.

- Strongtalk assembler, the basis of the files assembler-arm-inl.h,
  assembler-arm.cc, assembler-arm.h, assembler-ia32-inl.h,
  assembler-ia32.cc, assembler-ia32.h, assembler-x64-inl.h,
  assembler-x64.cc, assembler-x64.h, assembler.cc and assembler.h.
  This code is copyrighted by Sun Microsystems Inc. and released
  under a 3-clause BSD license.

- Valgrind client API header, located at src/third_party/valgrind/valgrind.h
  This is released under the BSD license.

- The Wasm C/C++ API headers, located at third_party/wasm-api/wasm.{h,hh}
  This is released under the Apache license. The API's upstream prototype
  implementation also formed the basis of V8's implementation in
  src/wasm/c-api.cc.

These libraries have their own licenses; we recommend you read them,
as their terms may differ from the terms below.

Further license information can be found in LICENSE files located in
sub-directories.

Copyright 2014, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
    notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
    copyright notice,
this list of conditions and the following
    disclaimer in the documentation and/or other materials provided
    with the distribution.
  * Neither the name of Google Inc. nor the names of its
    contributors may be used to endorse or promote products derived
    from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING
IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright (c) 2008-2009 Bjoern Hoehrmann <bjoern@hoehrmann.de>

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
The 3-Clause BSD License

Copyright 2019 web-platform-tests contributors

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND

ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL
THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Copyright 2016 The Chromium Authors
//
// Redistribution and use in source and binary forms, with or without
// modification, are permitted provided that the following conditions are
// met:
//
//   * Redistributions of source code must retain the above copyright
// notice, this list of conditions and the following disclaimer.
//   * Redistributions in binary form must reproduce the above
// copyright notice, this list of conditions and the following disclaimer
// in the documentation and/or other materials provided with the
// distribution.
//   * Neither the name of Google Inc. nor the names of its
// contributors may be used to endorse or promote products derived from
// this software without specific prior written permission.
//
// THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
// "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
// LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
// A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE COPYRIGHT
// OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
// SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
// LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
// DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
// THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
// (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
// OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
All files in this directory are provided by the following license if not stated
otherwise in the individual file:
==========
This file is provided under a dual BSD/GPLv2 license. When using or
redistributing this file, you may do so under either license.

GPL LICENSE SUMMARY

Copyright (c) 2005-2012 Intel Corporation. All rights reserved.

This program is free software; you can redistribute it and/or modify
it under the terms of version 2 of the GNU General Public License as
published by the Free Software Foundation.

This program is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin St - Fifth Floor, Boston, MA 02110-1301 USA.
The full GNU General Public License
 is included in this distribution
in the file called LICENSE.GPL.

Contact Information:
http://software.intel.com/en-us/articles/intel-vtune-amplifier-xe/

BSD LICENSE

Copyright (c) 2005-2012 Intel Corporation. All rights reserved.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

 * Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
 * Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in
   the documentation and/or other materials provided with the
   distribution.
 * Neither the name of Intel Corporation nor the names of its
   contributors may be used to endorse or promote products derived
   from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS
 AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT

(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

==========

CC0 1.0 Universal

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an "owner") of an original work of authorship and/or a database (each, a "Work").

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works ("Commons") that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For
these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the "Affirmer"), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be protected by copyright and related or neighboring rights ("Copyright and Related Rights"). Copyright and Related Rights include, but are not limited to, the following:

i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;

ii. moral rights retained by the original author(s) and/or performer(s);

iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;

iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;

v. rights protecting the extraction, dissemination, use and reuse of data in a Work;

vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and

vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes of action, whether now known
or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved
to the maximum extent permitted taking into account
Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive, irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and
in such case Affirmer hereby
affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims

and causes of action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.

b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise, including without limitation warranties of title, merchantability, fitness for a particular purpose, non infringement, or the absence of latent or other defects, accuracy, or the present or absence of errors, whether or not discoverable, all to the greatest extent permissible under applicable law.

c. Affirmer disclaims responsibility for clearing rights of other persons
that may apply to the Work or any use thereof, including without limitation any person's Copyright and Related Rights in the Work. Further, Affirmer disclaims responsibility for obtaining any necessary consents, permissions or other rights required for any use of the Work.

d. Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.

For more information, please see
<http://creativecommons.org/publicdomain/zero/1.0/>
Copyright (c) 1994-2006 Sun Microsystems Inc.
All Rights Reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- Redistribution in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- Neither the name of Sun Microsystems or the names of contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO,

THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Tests included here are based on build output generated by the six-speed
benchmark suite.

Copyright (c) 2015 Kevin Decker

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN
AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
// Copyright (c) 2009 The RE2 Authors. All rights reserved.
//
// Redistribution and use in source and binary forms, with or without
// modification, are permitted provided that the following conditions are
// met:
//
//   * Redistributions of source code must retain the above copyright
// notice, this list of conditions and the following disclaimer.
//   * Redistributions in binary form must reproduce the above
// copyright notice, this list of conditions and the following disclaimer
// in the documentation and/or other materials provided with the
// distribution.
//   * Neither the name of Google Inc. nor the names of its
// contributors may be used to endorse or promote products derived from
// this software without specific prior written permission.

//
// THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
// "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
// LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
// A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
// OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
// SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
// LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
// DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
// THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
// (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
// OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide
to use it. You
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use,
not price. Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs

(which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify

that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative

work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object
code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany
the work with the complete corresponding
machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly
with a modified version of the library, if
the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials

specified in Subsection 6a, above, for a charge no more
than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy
from a designated place, offer equivalent access to copy the above
specified materials from the same place.

e) Verify that the user has already received a copy of these
materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it. However, as a special exception,
the materials to be distributed need not include anything that is
normally
distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system. Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

7. You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work
based on the Library, uncombined with any
other library
facilities. This must be distributed under the terms of the
Sections above.

b) Give prominent notice with the combined library of the fact
that part of it is a work based on the Library, and explaining
where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License. Any
attempt otherwise to copy, modify, sublicense, link with, or
distribute the Library is void, and will automatically terminate your
rights under this License. However, parties who have received copies,

or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing

to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

13. The Free Software Foundation may publish
revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this. Our
decision
will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME

THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey
the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the
 library `Frob' (a library for tweaking knobs) written by James Random Hacker.

 <signature of Ty Coon>, 1 April 1990
 Ty Coon, President of Vice

That's all there is to it!
PCRE LICENCE

PCRE is a library of functions to support regular expressions whose syntax
and semantics are as close as possible to those of the Perl 5 language.

Release 7 of PCRE is distributed under the terms of the "BSD" licence, as
specified below. The documentation for PCRE, supplied in the "doc"
directory, is distributed under the same terms as the software itself.

The basic library functions are written in C and are freestanding. Also
included in the distribution is a set of C++ wrapper functions.

THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel
Email local part: ph10
Email domain: cam.ac.uk

University of Cambridge Computing Service,
Cambridge, England.

Copyright (c) 1997-2007 University of Cambridge
All rights reserved.

THE C++ WRAPPER FUNCTIONS

Contributed by: Google Inc.

Copyright (c) 2007, Google Inc.
All rights reserved.

THE "BSD" LICENCE

Redistribution and use in
source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.

* Neither the name of the University of Cambridge nor the name of Google
Inc. nor the names of their contributors may be used to endorse or
promote products derived from this software without specific prior
written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

End
Copyright (c) 2010 Jonathan Hartley
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.

* Neither the name of the copyright holders, nor those of its contributors
may be used to endorse or promote products derived from this software without
specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
HOLDER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright (C) 1993-2004 by Sun Microsystems, Inc. All rights reserved.

Developed at SunSoft, a Sun Microsystems, Inc. business.
Permission to use, copy, modify, and distribute this
software is freely granted, provided that this notice
is preserved.
Copyright (c) 2006 Apple Computer, Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.

3. Neither the name of the copyright holder(s) nor the names of any
contributors may be used to endorse or promote products derived
from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)

HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
OF THE POSSIBILITY OF SUCH DAMAGE.
The JsonCpp library's source code, including accompanying documentation,
tests and demonstration applications, are licensed under the following
conditions...

The author (Baptiste Lepilleur) explicitly disclaims copyright in all
jurisdictions which recognize such a disclaimer. In such jurisdictions,
this software is released into the Public Domain.

In jurisdictions which do not recognize Public Domain property (e.g. Germany as of
2010), this software is Copyright (c) 2007-2010 by Baptiste Lepilleur, and is
released under the terms of the MIT License (see below).

In jurisdictions which recognize Public Domain property, the user of this
software may choose to accept it either as 1) Public Domain, 2) under the
conditions of the MIT License (see below), or 3) under the terms of dual
Public Domain/MIT License conditions described here, as they choose.

The MIT License is about as close to Public Domain as a license can get, and is
described in clear, concise terms at:

http://en.wikipedia.org/wiki/MIT_License

The full text of the MIT License follows:

==
Copyright (c) 2007-2010 Baptiste Lepilleur

Permission is hereby granted, free of charge, to any person
obtaining a copy of this software and associated documentation
files (the "Software"), to deal in the Software without
restriction, including without limitation the rights to use, copy,
modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT
HOLDERS
BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN

ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

==========

(END LICENSE TEXT)

The MIT license is compatible with both the GPL and commercial software, affording one all of the rights of Public Domain with the minor nuisance of being required to keep the above copyright notice and license text in the source code. Note also that by accepting the Public Domain "license" you can re-license your copy using whatever license you like.

Notice that the following BSD-style license applies to this one file (valgrind.h) only. The rest of Valgrind is licensed under the terms of the GNU General Public License, version 2, unless otherwise indicated. See the COPYING file in the source distribution for details.

This file is part of Valgrind, a dynamic binary instrumentation framework.

Copyright (C) 2000-2010 Julian Seward. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment
in the product
documentation would be appreciated but is not required.

3. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.

4. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS

OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE,
EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice that the above BSD-style license applies to this one file (valgrind.h) only. The entire rest of Valgrind is licensed under the terms of the GNU General Public License, version 2. See the COPYING file in the source distribution for details.

A. HISTORY OF THE SOFTWARE
==========

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see http://www.cwi.nl) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see http://www.cnri.reston.va.us) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see https://www.python.org/psf/) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

All
Python releases are Open Source (see http://www.opensource.org for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release	Derived	Year	Owner	GPL-

	from		compatible? (1)
0.9.0 thru 1.2		1991-1995	CWI yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI yes
1.6	1.5.2	2000	CNRI no
2.0	1.6	2000	BeOpen.com no
1.6.1	1.6	2001	CNRI yes (2)
2.1	2.0+1.6.1	2001	PSF no
2.0.1	2.0+1.6.1	2001	PSF yes
2.1.1	2.1+2.0.1	2001	PSF yes
2.1.2	2.1.1	2002	PSF yes
2.1.3	2.1.2	2002	PSF yes
2.2 and above	2.1.1	2001-now	
PSF yes			

Footnotes:

(1) GPL-compatible doesn't mean that we're distributing Python under the GPL. All Python licenses, unlike the GPL, let you distribute a modified version without making your changes open source. The GPL-compatible licenses make it possible to combine Python with other software that is released under the GPL; the others don't.

(2) According to Richard Stallman, 1.6.1 is not GPL-compatible, because its license has a choice of law clause. According to CNRI, however, Stallman's lawyer has told CNRI's lawyer that 1.6.1 is "not incompatible" with the GPL.

Thanks to the many outside volunteers who have worked under Guido's direction to make these releases possible.

B. TERMS AND CONDITIONS FOR ACCESSING OR OTHERWISE USING PYTHON
==========

PYTHON SOFTWARE FOUNDATION LICENSE VERSION 2
---

1. This LICENSE AGREEMENT is between the
Python Software Foundation
("PSF"), and the Individual or Organization ("Licensee") accessing and otherwise using this software ("Python") in source or binary form and its associated documentation.

2. Subject to the terms and conditions of this License Agreement, PSF hereby grants Licensee a nonexclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use Python alone or in any derivative version,

provided, however, that PSF's License Agreement and PSF's notice of copyright, i.e., "Copyright (c) 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018 Python Software Foundation; All Rights Reserved" are retained in Python alone or in any derivative version prepared by Licensee.

3. In the event Licensee prepares a derivative work that is based on or incorporates Python or any part thereof, and wants to make the derivative work available to others as provided herein, then Licensee hereby agrees to include in any such work a brief summary of the changes made to Python.

4. PSF is making Python available to Licensee on an "AS IS" basis. PSF MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, PSF MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.

5. PSF SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

6. This License Agreement will automatically terminate upon a material breach of its terms and conditions.

7. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between PSF and Licensee. This License Agreement does not grant permission to use PSF trademarks or trade name in a trademark sense to endorse or promote products or services of Licensee, or any third party.

8. By copying, installing or otherwise using Python, Licensee agrees to be bound by the terms and conditions of this License Agreement.

BEOPEN.COM LICENSE AGREEMENT FOR PYTHON 2.0

BEOPEN PYTHON OPEN SOURCE LICENSE AGREEMENT VERSION 1

1. This LICENSE AGREEMENT is between BeOpen.com ("BeOpen"), having an office at 160 Saratoga Avenue, Santa Clara, CA 95051, and the Individual or Organization ("Licensee") accessing and otherwise using

this software in source or binary form and its associated
documentation ("the Software").

2. Subject to the terms and conditions of this BeOpen Python License
Agreement, BeOpen hereby grants Licensee a non-exclusive,
royalty-free, world-wide license to reproduce, analyze, test, perform
and/or display publicly, prepare
derivative works, distribute, and
otherwise use the Software alone or in any derivative version,
provided, however, that the BeOpen Python License is retained in the
Software, alone or in any derivative version prepared by Licensee.

3. BeOpen is making the Software available to Licensee on an "AS IS"
basis. BEOPEN MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR
IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, BEOPEN MAKES NO AND
DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS
FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF THE SOFTWARE WILL NOT
INFRINGE ANY THIRD PARTY RIGHTS.

4. BEOPEN SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF THE
SOFTWARE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS
AS A RESULT OF USING, MODIFYING OR DISTRIBUTING THE SOFTWARE, OR ANY
DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

5. This License Agreement will automatically terminate upon a material
breach of its terms and conditions.

6.
This License Agreement shall be governed by and interpreted in all
respects by the law of the State of California, excluding conflict of
law provisions. Nothing in this License Agreement shall be deemed to
create any relationship of agency, partnership, or joint venture
between BeOpen and Licensee. This License Agreement does not grant
permission to use BeOpen trademarks or trade names in a trademark
sense to endorse or promote products or services of Licensee, or any
third party. As an exception, the "BeOpen Python" logos available at
http://www.pythonlabs.com/logos.html may be used according to the
permissions granted on that web page.

7. By copying, installing or otherwise using the software, Licensee
agrees to be bound by the terms and conditions of this License
Agreement.

CNRI LICENSE AGREEMENT FOR PYTHON 1.6.1
---

1. This LICENSE AGREEMENT is between the Corporation for National

Research Initiatives, having an office at 1895 Preston White Drive,
Reston, VA 20191 ("CNRI"), and the Individual or Organization ("Licensee") accessing and otherwise using Python 1.6.1 software in source or binary form and its associated documentation.

2. Subject to the terms and conditions of this License Agreement, CNRI hereby grants Licensee a nonexclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use Python 1.6.1 alone or in any derivative version, provided, however, that CNRI's License Agreement and CNRI's notice of copyright, i.e., "Copyright (c) 1995-2001 Corporation for National Research Initiatives; All Rights Reserved" are retained in Python 1.6.1 alone or in any derivative version prepared by Licensee. Alternately, in lieu of CNRI's License Agreement, Licensee may substitute the following text (omitting the quotes): "Python 1.6.1 is made available subject to the terms and conditions in CNRI's License Agreement. This Agreement together with
Python 1.6.1 may be located on the Internet using the following unique, persistent identifier (known as a handle): 1895.22/1013. This Agreement may also be obtained from a proxy server on the Internet using the following URL: http://hdl.handle.net/1895.22/1013".

3. In the event Licensee prepares a derivative work that is based on or incorporates Python 1.6.1 or any part thereof, and wants to make the derivative work available to others as provided herein, then Licensee hereby agrees to include in any such work a brief summary of the changes made to Python 1.6.1.

4. CNRI is making Python 1.6.1 available to Licensee on an "AS IS" basis. CNRI MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, CNRI MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON 1.6.1 WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.

5. CNRI SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON 1.6.1 FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON 1.6.1, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

6. This License Agreement will automatically terminate upon a material breach of its terms and conditions.

7. This License Agreement shall be governed by the federal intellectual property law of the United States, including without

limitation the federal copyright law, and, to the extent such
U.S. federal law does not apply, by the law of the Commonwealth of
Virginia, excluding Virginia's conflict of law provisions.
Notwithstanding the foregoing, with regard to derivative works based
on Python 1.6.1 that incorporate non-separable material that was
previously distributed under the GNU General Public License (GPL), the
law of the Commonwealth of Virginia shall govern this License
Agreement only as to issues arising under or with respect to
Paragraphs
4, 5, and 7 of this License Agreement. Nothing in this
License Agreement shall be deemed to create any relationship of
agency, partnership, or joint venture between CNRI and Licensee. This
License Agreement does not grant permission to use CNRI trademarks or
trade name in a trademark sense to endorse or promote products or
services of Licensee, or any third party.

8. By clicking on the "ACCEPT" button where indicated, or by copying,
installing or otherwise using Python 1.6.1, Licensee agrees to be
bound by the terms and conditions of this License Agreement.

ACCEPT

CWI LICENSE AGREEMENT FOR PYTHON 0.9.0 THROUGH 1.2

Copyright (c) 1991 - 1995, Stichting Mathematisch Centrum Amsterdam,
The Netherlands. All rights reserved.

Permission to use, copy, modify, and distribute this software and its
documentation for any purpose and without fee is hereby granted,
provided that the above copyright notice appear in all copies and that
both
that copyright notice and this permission notice appear in
supporting documentation, and that the name of Stichting Mathematisch
Centrum or CWI not be used in advertising or publicity pertaining to
distribution of the software without specific, written prior
permission.

STICHTING MATHEMATISCH CENTRUM DISCLAIMS ALL WARRANTIES WITH REGARD TO
THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND
FITNESS, IN NO EVENT SHALL STICHTING MATHEMATISCH CENTRUM BE LIABLE
FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT
OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without

modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
  copyright notice, this list of conditions and the following
  disclaimer in the documentation and/or other materials provided
  with the distribution.
* Neither the name of Google Inc. nor the names of its
  contributors may be used to endorse or promote products derived
  from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE
 DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
ISC
MIT
The MIT License (MIT)

Copyright (c) 2017 Facebook Inc.
Copyright (c) 2017 Georgia Institute of Technology
Copyright 2019 Google LLC

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
 WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.6 icu 74.2-r1

1.6.1 Available under license :

---
layout: default
title: Legalities
parent: Release & Milestone Tasks
grand_parent: Contributors
nav_order: 70

<!--
2021 and later: Unicode, Inc. and others.
License & terms of use: http://www.unicode.org/copyright.html
-->

Legalities

1. Scan for Copyright notices

Check source and data files, especially newly contributed ones, to make sure the proper copyright notice is in place. For example,

```
2016 and later: Unicode, Inc. and others.
License & terms of use: http://www.unicode.org/copyright.html#License
```

Scan the source code to make sure that every file that was touched recently has the current year in the copyright statement. See the [ICU Copyright Scanner](../../../copyright-scan.md) page and follow the link to the scripts and the readme.

Scan the source code to include third-party company names in copyright notices if necessary.

~~Scan for text files that do not contain the word "Copyright": find_textfiles -nosvn -novc -noeclipse | xargs grep -i -L Copyright
(See the find_textfiles
Perl script attached to this page.) There are files without word "Copyright" in ICU source repository including some test data files (no comment syntax defined for these test data files), Unicode data files, tzcode source files and others. Review the output file list and determine if each of them should have ICU copyright statement or not.~~ ***The script find_textfiles associated with this document is not maintained. Use the ICU Copyright Scanner above instead.***

2. Update license files

Check ICU, Unicode and other license terms. Make sure these files are up to
date. The [Unicode data and software license
term](http://www.unicode.org/copyright.html) is updated annually (usually year
number only). The easiest way to get the updated license is to do View Source on
unicode.org/copyright.html and scroll down to the plaintext version of the
software license ("Exhibit A").

See [svn changeset r39632](https://github.com/unicode-
org/icu/commit/0001f6c5e92f6f3a8d66c7dbc47cc24df7633a71)
for
an example; there should be only two files to update.
MIT License

Copyright (c) 2013-2022 Niels Lohmann

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
-*-makefile-*-
Copyright (C) 2016 and later: Unicode, Inc. and others.
License & terms of use: http://www.unicode.org/copyright.html
BSD-specific setup (FreeBSD, OpenBSD, NetBSD, *BSD)
Copyright (c) 1999-2013, International Business Machines Corporation and
others. All Rights Reserved.

Commands to generate dependency files
GEN_DEPS.c= $(CC) -E -MM $(DEFS) $(CPPFLAGS)
GEN_DEPS.cc= $(CXX) -E -MM $(DEFS) $(CPPFLAGS)

Flags for position independent code

```
SHAREDLIBCFLAGS = -fPIC
SHAREDLIBCXXFLAGS = -fPIC
SHAREDLIBCPPFLAGS = -DPIC

## Additional flags when building libraries and with threads
THREADSCPPFLAGS = -D_REENTRANT
LIBCPPFLAGS =

## Compiler switch to embed a runtime search path
LD_RPATH=
LD_RPATH_PRE= -Wl,-rpath,

## Compiler switch to embed a library name
LD_SONAME = -Wl,-soname -Wl,$(notdir $(MIDDLE_SO_TARGET))

## Shared library options
LD_SOOPTIONS= -Wl,-Bsymbolic

## Shared object suffix
SO = so
## Non-shared intermediate object suffix
STATIC_O = ao

## Compilation
 rules
%.$(STATIC_O): $(srcdir)/%.c
 $(COMPILE.c) $(STATICCPPFLAGS) $(STATICCFLAGS) -o $@ $<
%.o: $(srcdir)/%.c
 $(COMPILE.c) $(DYNAMICCPPFLAGS) $(DYNAMICCFLAGS) -o $@ $<

%.$(STATIC_O): $(srcdir)/%.cpp
 $(COMPILE.cc) $(STATICCPPFLAGS) $(STATICCXXFLAGS) -o $@ $<
%.o: $(srcdir)/%.cpp
 $(COMPILE.cc) $(DYNAMICCPPFLAGS) $(DYNAMICCXXFLAGS) -o $@ $<


## Dependency rules
%.d: $(srcdir)/%.c
 @echo "generating dependency information for $<"
 @$(SHELL) -ec '$(GEN_DEPS.c) $< \
  | sed '\"s/\($*\)\.o[ :]*/\1.o $@ : /g'\" > $@; \
  [ -s $@ ] || rm -f $@'

%.d: $(srcdir)/%.cpp
 @echo "generating dependency information for $<"
 @$(SHELL) -ec '$(GEN_DEPS.cc) $< \
  | sed '\"s/\($*\)\.o[ :]*/\1.o $@ : /g'\" > $@; \
  [ -s $@ ] || rm -f $@'
```

Versioned libraries rules

%.$(SO).$(SO_TARGET_VERSION_MAJOR): %.$(SO).$(SO_TARGET_VERSION)
 $(RM) $@ && ln -s ${<F} $@
%.$(SO): %.$(SO).$(SO_TARGET_VERSION_MAJOR)
 $(RM) $@ && ln -s ${*F}.$(SO).$(SO_TARGET_VERSION) $@

Bind internal references

LDflags that pkgdata will use
BIR_LDFLAGS= -Wl,-Bsymbolic

Dependencies [i.e. map files] for the final library
BIR_DEPS=

Remove shared library 's'
STATIC_PREFIX_WHEN_USED =
STATIC_PREFIX =

End BSD-specific setup
Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
    notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
    copyright notice, this list of conditions and the following
    disclaimer in the documentation and/or other materials provided
    with the distribution.
  * Neither the name of Google Inc. nor the names of its
    contributors may be used to endorse or promote products derived
    from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE
 DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

UNICODE LICENSE V3

COPYRIGHT AND PERMISSION NOTICE

Copyright 2016-2025 Unicode, Inc.

NOTICE TO USER: Carefully read the following legal agreement. BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING DATA FILES, AND/OR SOFTWARE, YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.

Permission is hereby granted, free of charge, to any person obtaining a copy of data files and any associated documentation (the "Data Files") or software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that either (a) this copyright and permission notice appear with all copies of the Data Files or Software, or (b) this copyright and permission notice appear in associated Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.

SPDX-License-Identifier:
Unicode-3.0

Third-Party Software Licenses

This section contains third-party software notices and/or additional
terms for licensed third-party software components included within ICU
libraries.

ICU License - ICU 1.8.1 to ICU 57.1

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others
All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, and/or sell copies of the Software, and to permit persons
to whom the Software is furnished to do so, provided that the above
copyright notice(s) and this permission notice appear in all copies
of
the Software and that both the above copyright notice(s) and this
permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT
OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR
HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY
SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER
RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF
CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale, use
or other dealings in this Software without prior written authorization
of the copyright holder.

All trademarks and registered trademarks mentioned
herein are the
property of their respective owners.

Chinese/Japanese Word Break Dictionary Data (cjdict.txt)

The Google Chrome software developed by Google is licensed under

```
# the BSD license. Other software included in this distribution is
# provided under other licenses, as set forth below.
#
#  The BSD License
#  http://opensource.org/licenses/bsd-license.php
#  Copyright (C) 2006-2008, Google Inc.
#
#  All rights reserved.
#
#  Redistribution and use in source and binary forms, with or without
# modification, are permitted provided that the following conditions are met:
#
#  Redistributions of source code must retain the above copyright notice,
# this list of conditions and the following disclaimer.
#  Redistributions in binary form must reproduce the above
# copyright notice, this list of conditions and the following
# disclaimer in the documentation and/or other materials provided
 with
# the distribution.
#  Neither the name of  Google Inc. nor the names of its
# contributors may be used to endorse or promote products derived from
# this software without specific prior written permission.
#
#
#  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
# CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
# INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
# MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
# DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
# LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
# CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
# SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
# BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
# LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
# NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
# SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
 OF SUCH DAMAGE.
#
#
#  The word list in cjdict.txt are generated by combining three word lists
# listed below with further processing for compound word breaking. The
# frequency is generated with an iterative training against Google web
# corpora.
#
#  * Libtabe (Chinese)
#    - https://sourceforge.net/project/?group_id=1519
#    - Its license terms and conditions are shown below.
#
```

```
#  * IPADIC (Japanese)
#    - http://chasen.aist-nara.ac.jp/chasen/distribution.html
#    - Its license terms and conditions are shown below.
#
#  ---------COPYING.libtabe ---- BEGIN--------------------
#
#  /*
#   * Copyright (c) 1999 TaBE Project.
#   * Copyright (c) 1999 Pai-Hsiang Hsiao.
#   * All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this
 list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the TaBE Project nor the names of its
#   *   contributors may be used to endorse or promote products derived
#   *   from this software without specific prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  /*
#   * Copyright (c) 1999 Computer Systems and Communication Lab,
#   *                    Institute of Information Science, Academia
#       *                    Sinica. All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
```

```
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following
 disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the Computer Systems and Communication Lab
#   *   nor the names of its contributors may be used to endorse or
#   *   promote products derived from this software without specific
#   *   prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
 CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  Copyright 1996 Chih-Hao Tsai @ Beckman Institute,
#      University of Illinois
#  c-tsai4@uiuc.edu  http://casper.beckman.uiuc.edu/~c-tsai4
#
#  ----------------COPYING.libtabe-----END--------------------------------
#
#
#  ----------------COPYING.ipadic-----BEGIN-------------------------------
#
#  Copyright 2000, 2001, 2002, 2003 Nara Institute of Science
#  and Technology.  All Rights Reserved.
#
#  Use, reproduction, and distribution of this software is permitted.
#  Any copy of this software, whether in its original form or modified,
#  must include both the above copyright notice and the following
#  paragraphs.
#
#  Nara Institute of Science and Technology (NAIST),
#  the copyright holders, disclaims all warranties with regard to this
```

```
#  software, including
 all implied warranties of merchantability and
#  fitness, in no event shall NAIST be liable for
#  any special, indirect or consequential damages or any damages
#  whatsoever resulting from loss of use, data or profits, whether in an
#  action of contract, negligence or other tortuous action, arising out
#  of or in connection with the use or performance of this software.
#
#  A large portion of the dictionary entries
#  originate from ICOT Free Software.  The following conditions for ICOT
#  Free Software applies to the current dictionary as well.
#
#  Each User may also freely distribute the Program, whether in its
#  original form or modified, to any third party or parties, PROVIDED
#  that the provisions of Section 3 ("NO WARRANTY") will ALWAYS appear
#  on, or be attached to, the Program, which is distributed substantially
#  in the same form as set out herein and that such intended
#  distribution, if actually made, will neither violate or otherwise
#  contravene
 any of the laws and regulations of the countries having
#  jurisdiction over the User or the intended distribution itself.
#
#  NO WARRANTY
#
#  The program was produced on an experimental basis in the course of the
#  research and development conducted during the project and is provided
#  to users as so produced on an experimental basis.  Accordingly, the
#  program is provided without any warranty whatsoever, whether express,
#  implied, statutory or otherwise.  The term "warranty" used herein
#  includes, but is not limited to, any warranty of the quality,
#  performance, merchantability and fitness for a particular purpose of
#  the program and the nonexistence of any infringement or violation of
#  any right of any third party.
#
#  Each user of the program will agree and understand, and be deemed to
#  have agreed and understood, that there is no warranty whatsoever for
#  the program and, accordingly, the entire risk arising from or
#  otherwise connected
 with the program is assumed by the user.
#
#  Therefore, neither ICOT, the copyright holder, or any other
#  organization that participated in or was otherwise related to the
#  development of the program and their respective officials, directors,
#  officers and other employees shall be held liable for any and all
#  damages, including, without limitation, general, special, incidental
#  and consequential damages, arising out of or otherwise in connection
#  with the use or inability to use the program or any product, material
#  or result produced or otherwise obtained by using the program,
```

regardless of whether they have been advised of, or otherwise had
knowledge of, the possibility of such damages at any time during the
project or thereafter. Each user will be deemed to have agreed to the
foregoing by his or her commencement of use of the program. The term
"use" as used herein includes, but is not limited to, the use,
modification, copying and
 distribution of the program and the
production of secondary products from the program.
#
In the case where the program, whether in its original form or
modified, was distributed or delivered to or received by a user from
any person, organization or entity other than ICOT, unless it makes or
grants independently of ICOT any specific warranty to the user in
writing, such person, organization or entity, will also be exempted
from and not be held liable to the user for any such damages as noted
above as far as the program is concerned.
#
----------COPYING.ipadic-----END---------------------------------

---

Lao Word Break Dictionary Data (laodict.txt)

Copyright (C) 2016 and later: Unicode, Inc. and others.
License & terms of use: http://www.unicode.org/copyright.html
Copyright (c) 2015 International Business Machines Corporation
and others. All Rights Reserved.
#
#
 Project: https://github.com/rober42539/lao-dictionary
Dictionary: https://github.com/rober42539/lao-dictionary/laodict.txt
License: https://github.com/rober42539/lao-dictionary/LICENSE.txt
(copied below)
#
This file is derived from the above dictionary version of Nov 22, 2020
--
Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:
#
Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer. Redistributions in binary
form must reproduce the above copyright notice, this list of conditions and
the following disclaimer in the documentation and/or other materials
provided with the distribution.
#

THIS SOFTWARE IS PROVIDED
BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
OF THE POSSIBILITY OF SUCH DAMAGE.
--

Burmese Word Break Dictionary Data (burmesedict.txt)

Copyright (c) 2014 International
Business Machines Corporation
and others. All Rights Reserved.
#
This list is part of a project hosted at:
github.com/kanyawtech/myanmar-karen-word-lists
#
--
Copyright (c) 2013, LeRoy Benjamin Sharon
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met: Redistributions of source code must retain the above
copyright notice, this list of conditions and the following
disclaimer. Redistributions in binary form must reproduce the
above copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
#
Neither the name Myanmar Karen Word Lists, nor the names of its
contributors may be used to endorse or promote products derived
from this software
without specific prior written permission.
#
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE

DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED
TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF
THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.
--

Time
Zone Database

ICU uses the public domain data and code derived from Time Zone
Database for its time zone support. The ownership of the TZ database
is explained in BCP 175: Procedure for Maintaining the Time Zone
Database section 7.

7. Database Ownership
#
The TZ database itself is not an IETF Contribution or an IETF
document. Rather it is a pre-existing and regularly updated work
that is in the public domain, and is intended to remain in the
public domain. Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do
not apply to the TZ Database or contributions that individuals make
to it. Should any claims be made and substantiated against the TZ
Database, the organization that is providing the IANA
Considerations defined in this RFC, under the memorandum of
understanding with the IETF, currently ICANN, may act in accordance
with all competent court orders. No ownership claims will be made
by ICANN or
the IETF Trust on the database or the code. Any person
making a contribution to the database or code waives all rights to
future claims in that contribution or in the TZ Database.

Google double-conversion

Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright

notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived

from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

JSON parsing library (nlohmann/json)

File: vendor/json/upstream/single_include/nlohmann/json.hpp (only for
ICU4C)

MIT License

Copyright (c) 2013-2022 Niels Lohmann

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,

OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

File: aclocal.m4 (only for ICU4C)
Section: pkg.m4 - Macros to locate and utilise pkg-config.

Copyright 2004 Scott James Remnant <scott@netsplit.com>.
Copyright 2012-2015 Dan Nicholson <dbn.lists@gmail.com>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 59 Temple Place
- Suite 330, Boston, MA
02111-1307, USA.

As a special exception to the GNU General Public License, if you
distribute this file as part of a program that contains a
configuration script generated by Autoconf, you may include it under
the same distribution terms that you use for the rest of that
program.

(The condition for the exception is fulfilled because
ICU4C includes a configuration script generated by Autoconf,
namely the `configure` script.)

File: config.guess (only for ICU4C)

This file is free software; you can redistribute it and/or modify it
under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or

(at your option) any later version.

This program is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General
 Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, see <https://www.gnu.org/licenses/>.

As a special exception to the GNU General Public License, if you
distribute this file as part of a program that contains a
configuration script generated by Autoconf, you may include it under
the same distribution terms that you use for the rest of that
program. This Exception is an additional permission under section 7
of the GNU General Public License, version 3 ("GPLv3").

(The condition for the exception is fulfilled because
ICU4C includes a configuration script generated by Autoconf,
namely the `configure` script.)

File: install-sh (only for ICU4C)

Copyright 1991 by the Massachusetts Institute of Technology

Permission to use, copy, modify, distribute, and sell this software and its
documentation for any purpose is hereby granted
 without fee, provided that
the above copyright notice appear in all copies and that both that
copyright notice and this permission notice appear in supporting
documentation, and that the name of M.I.T. not be used in advertising or
publicity pertaining to distribution of the software without specific,
written prior permission. M.I.T. makes no representations about the
suitability of this software for any purpose. It is provided "as is"
without express or implied warranty.

File: sorttable.js (only for ICU4J)

The MIT Licence, for code from kryogenix.org

Code downloaded from the Browser Experiments section of kryogenix.org is

licenced under the so-called MIT licence. The licence is below.

Copyright (c) 1997-date Stuart Langridge

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction,
including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following conditions:

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.7 goautoneg 0.0.0-20191010083416-a7dc8b61c822

1.7.1 Available under license :

Copyright (c) 2011, Open Knowledge Foundation Ltd.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in
the documentation and/or other materials provided with the
distribution.

Neither the name of the Open Knowledge Foundation Ltd. nor the
names of its contributors may be used to endorse or promote
products derived from this software without specific prior written
permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.8 aws-sdk-go-v2-service-sts 1.38.2

1.8.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string

 // Product name.
 //
 // This member is required.
 ProductName *string
```

```
 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // Date and time range during which the license is valid, in ISO8601-UTC format.
 //
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
```

```
  runs-on: ubuntu-latest
  strategy:
    matrix:
      python-version: [3.9]

  steps:
    - name: Checkout target
      uses: actions/checkout@v2
      with:
        path: sdkbase
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
```

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper

```
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
```

```
  - Fingerprint
//
//   - IssuerName
//
//   - Beneficiary
Filters []types.Filter

// Amazon Resource Names (ARNs) of the licenses.
LicenseArns []string

// Maximum number of results to return in a single call.
MaxResults *int32

// Token for the next set of results.
NextToken *string

noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

// Received license details.
Licenses []types.GrantedLicense

// Token for the next set of results.
NextToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
```

```
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
```

```
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
   "smithy": "2.0",
   "shapes": {
      "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
            "smithy.api#error": "client"
         }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
      "members": {
        "DomainName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
          }
        },
        "DomainIpv4List": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
          "traits": {
            "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 2
```

```
                }
              }
            },
            "DomainCredentialsProvider": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "SELF_MANAGED",
                "value": "SELF_MANAGED",
                "documentation": "SELF_MANAGED type of Active Directory"
              },
              {
                "name": "AWS_MANAGED",
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Arn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
          }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n          <note>\n             <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
{
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The identity provider for the user.</p>",
            "smithy.api#required": {}
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
          }
        }
      },
      "traits": {

    "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
      "type": "structure",
      "members": {
```

```
        "InstanceUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
         }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

       {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
              }
            },
            "LicenseServerEndpointArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
          "type": "union",
          "members": {
            "SecretsManagerCredentialsProvider":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
      ],
      "traits": {
        "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/license-server/DeleteLicenseServerEndpoint"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
      "type": "structure",
      "members": {
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                "smithy.api#required": {}
              }
            },
             "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoint": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
              "traits": {
                "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
              }
            }
          },
           "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
              }
            },
            "InstanceUserArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
```

```
                    "min": 1
                },

    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
```

```
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                 "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
             "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
               }
            },
            "FailureMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
         "type": "list",
         "member": {

           "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
         "type": "structure",
         "members": {
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                  "smithy.api#required": {}
               }
            },
            "Products": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                  "smithy.api#required": {}
               }
```

```
            },
            "LastStatusCheckDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date of the last status check.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },

      "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
```

```
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                 }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
                }
            },
            "AssociationDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
                }
            },
            "DisassociationDate": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
   "type": "structure",
   "members": {
      "message": {
         "target": "smithy.api#String"
      }
   },
   "traits": {
      "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
       "smithy.api#error": "server",
      "smithy.api#httpError": 500
   }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
   "type": "string",
   "traits": {
      "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
   "type": "service",
   "version": "2018-05-10",
   "operations": [
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
       },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
      },
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
            },
            {
"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
            }
          ],
          "traits": {
            "aws.api#service": {
              "sdkId": "License Manager User Subscriptions",
              "arnNamespace": "license-manager-user-subscriptions",
              "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
```

```
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

        "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
              "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
```

```
        "UseFIPS": {
          "builtIn": "AWS::UseFIPS",
          "required": true,
          "default": false,
          "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
          "type": "Boolean"
        },
        "Endpoint": {
          "builtIn": "SDK::Endpoint",
          "required": false,
          "documentation": "Override the endpoint used to send this request",
          "type": "String"
        }
      },
      "rules": [
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Endpoint"
                }
              ]
            }
           ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [
                {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "endpoint": {
              "url": {
                "ref": "Endpoint"
              },

"properties": {},
              "headers": {}
            },
            "type": "endpoint"
          }
        ],
        "type": "tree"
      },
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Region"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "aws.partition",

                "argv": [
                  {
                    "ref": "Region"
                  }
```

```
                ],
                "assign": "PartitionResult"
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

true

```
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
```

"fn": "booleanEquals",

```
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          }
                        ]
                      },
```

```
                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

                ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }

    ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
```

```
{
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "fn": "getAttr",
                                            "argv": [

                {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsFIPS"
                                        ]
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

  }
                    ],
```

```
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

         }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
```

```
                ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "DualStack is enabled but this partition does not support DualStack",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

            "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
      }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",

      "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS":
true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint":
{
                "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
```

```
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
```

```
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
```

```
                {
                  "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
                    }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack":
 false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error":
```

```
"Invalid Configuration: FIPS and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },
                  {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": true,
                      "Endpoint": "https://example.com"
                     }
                  },
                  {
                    "documentation": "Missing region",
                    "expect": {
                      "error": "Invalid Configuration: Missing Region"
                    }
                  }
                ],
                "version": "1.0"
              }
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
            "type": "structure",
            "members": {
              "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
              },
              "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
```

```
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
    "type": "string"
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
    }
},
```

```
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
    "traits": {
      "smithy.api#enum": [
         {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
         },
         {
```

```
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "IdentityProviderSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Product</p>\n          </li>\n          <li>\n            <p>DirectoryId</p>\n
</li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
              }
            },
             "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/instance/ListInstances"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
```

```
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
              }
            },
            "NextToken": {
               "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoints": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
              }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "ProductUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
              }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
```

```
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
         },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceUserSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
```

```
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
```

```
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

           "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                "smithy.api#required": {}
            }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
        },
        "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                "smithy.api#required": {}
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",
```

```
        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation":
"<p>Contains settings for a specific server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "RDS_SAL",
                    "value": "RDS_SAL",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
```

```
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                "smithy.api#required": {}
              }
            }
          },

          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

             "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
```

provider. \n <note>\n
Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as Pending billing status) in Amazon Web Services Billing. For more information, see Viewing your\n\t\t\t\tmonthly charges in the Amazon Web Services Billing User Guide. \n </note>",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/user/StartProductSubscription"
}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
"type": "structure",
"members": {
"Username": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The user name
from the identity provider of the user. ",
"smithy.api#required": {}
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " An object that specifies details for the identity provider. ",
"smithy.api#required": {}
}
},
"Product": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The name of the user-based subscription product. \n
Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}
}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user for whom to start the product \n\t\t\tsubscription. "
}

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n          </p>"
                }
            },
            "ProductUserArn": {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
```

```
    "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    },
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 50
      },
      "smithy.api#sensitive": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
     },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
      "smithy.api#http": {
        "method": "PUT",
        "uri": "/tags/{ResourceArn}"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
```

```
      "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
```

```
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
```

```
            },
            "TagKeys": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                   "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
 {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
  }
```


DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash

```
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
```

```
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
```

```
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
```

```
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
```

```
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
```

```
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
```

```
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string
```

```
 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
```

```
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
```

```
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
```

```
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
```

```
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
```

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above

copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

```
type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
```

```
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
```

```
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
```

```
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
```

Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },

    {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
```

```
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
```

```
        "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
               "traits": {
                  "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
               }
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
         "type": "structure",
         "members": {
            "AmiId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
               }
            },
            "InstanceID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
               }
            },
            "InstanceType": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The instance type of the resource.</p>"
               }
            },
            "AccountID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
```

```
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

  "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager Linux Subscriptions",
                 "arnNamespace": "license-manager-linux-subscriptions",
                "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
```

```
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
```

```
    "Endpoint": {
      "builtIn": "SDK::Endpoint",
      "required": false,
      "documentation": "Override the endpoint used to send this request",
      "type": "String"
    }
  },
  "rules": [
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Endpoint"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseFIPS"
                },
                true
              ]
            }

],
          "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
          "type": "error"
        },
        {
          "conditions": [],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
```

```
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": {
                        "ref": "Endpoint"
                    },
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
```

```
                }
            ],
            "assign": "PartitionResult"
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {

                    "ref": "UseFIPS"
                        },
                        true
                    ]
                },
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }

],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"

},
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
```

```
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [

                                                     {
                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],

        "rules": [
                                                {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],

                                "type": "tree"
                                        }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
```

```
                                {

            "conditions": [
                                    {
                                       "fn": "booleanEquals",
                                       "argv": [
                                          {
                                             "ref": "UseFIPS"
                                          },
                                          true
                                       ]
                                    }
                                 ],
                                 "rules": [
                                    {
                                       "conditions": [
                                          {

                           "fn": "booleanEquals",
                                             "argv": [
                                                {
                                                   "fn": "getAttr",
                                                   "argv": [
                                                      {
                                                         "ref": "PartitionResult"
                                                      },
                                                      "supportsFIPS"
                                                   ]
                                                },
                                                true

                                          ]
                                       }
                                    ],
                                    "rules": [
                                       {
                                          "conditions": [],
                                          "rules": [
                                             {
                                                "conditions": [],
                                                "endpoint": {
                                                   "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                   "headers": {}
                                                },
                                                "type": "endpoint"
```

```
                        }
                      ],
                      "type": "tree"
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "FIPS is enabled
but this partition does not support FIPS",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true

          ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {

                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]
                        }
                      ]
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [

        {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                          "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
                      }
                    ],
                    "type": "tree"

                }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [],
                "endpoint": {
                  "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          }
        ],
```

```
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

  }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
```

```
                }
            },
            {
                "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
        }
    }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
        "smithy.api#enum": [
            {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
        ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
        "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
            "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
            "smithy.api#required": {}
            }
        },
        "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
            "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
```

```
                "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
        <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
            <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
         "type": "structure",
```

```
        "members": {
            "Instances": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
```

```
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n        <p>The valid names for this filter are:</p>\n        <ul>\n <li>\n            <p>\n              <code>Subscription</code>\n            </p>\n          </li>\n        </ul>\n <p>The valid Operators for this filter are:</p>\n        <ul>\n          <li>\n            <p>\n <code>contains</code>\n            </p>\n          </li>\n          <li>\n            <p>\n <code>equals</code>\n            </p>\n          </li>\n          <li>\n            <p>\n       <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
```

```
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
```

```
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
```

```
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
             },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
```

```
                "min": 1,
                "max": 100
            }
        }
    },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
        },
        "Type": {
            "target": "smithy.api#String",
            "traits": {

 "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
        },
        "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
```

```
                "value": "INVALID",
                "documentation": "INVALID status"
              },
              {
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
```

```
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
```

```
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
      "type": "structure",
```

```
    "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
 {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
```

```
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
```

```
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
```

```
            "smithy.api#error": "client"
          }
        }
      }
    }
}
```

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step

spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.9 aws-sdk-go-v2-feature-dynamodb-attributevalue 1.20.9

1.9.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart

```
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
  name: License Scan
```

```
  runs-on: ubuntu-latest
  strategy:
    matrix:
      python-version: [3.9]

  steps:
    - name: Checkout target
      uses: actions/checkout@v2
      with:
        path: sdkbase
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration
```

```
// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}
```

```
type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
```

```
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
```

RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

```
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
```

```
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
```

```
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
```

```
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
```

```
{
        "type": "string",
        "traits": {
           "smithy.api#enum": [
              {
                 "name": "SELF_MANAGED",
                 "value": "SELF_MANAGED",
                 "documentation": "SELF_MANAGED type of Active Directory"
              },
              {
                 "name": "AWS_MANAGED",
                 "value": "AWS_MANAGED",
                 "documentation": "AWS_MANAGED type of Active Directory"
              }
           ]
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
           "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
           "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
           "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
           {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
           },
           {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
           },
           {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
           },
           {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
           },
           {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
              "code": 200,
              "method": "POST",
              "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
```

```
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
               }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
         "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
             }
         },
         "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
```

```
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS)
license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
```

```
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/DeregisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
```

```
    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
        "smithy.api#idempotent": {}
```

```
    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
```

```
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
```

```
            },
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
         "type": "union",
         "members": {
            "ActiveDirectoryIdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
```

```
        "Settings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
          }
        },
        "FailureMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },

    "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
           }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
          }
        },
```

```
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
                }
            },
            "AssociationDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
                }
            },
            "DisassociationDate": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
```

```
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

       "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
```

```
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
```

```
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [
                {

                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": {
                  "ref": "Endpoint"
                },

"properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
```

```
      ],
      "type": "tree"
    },
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Region"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "aws.partition",

              "argv": [
                {
                  "ref": "Region"
                }
              ],
              "assign": "PartitionResult"
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
```

true

```
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
```

```
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

 "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

            ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
```

```
                    },
                    "type": "endpoint"
                }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

  {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
                                "argv": [

                {
                                        "ref": "PartitionResult"
                                    },
                                    "supportsFIPS"
                                ]
                            },
                            true
                        ]
                    }
```

```
                                ],
                                "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {

                "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS is enabled but this partition does not support FIPS",
                                "type": "error"

}
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseDualStack"
                                        },
                                        true
                                    ]
                                }
                            ],
                            "rules": [
                                {

        "conditions": [
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [
                                                        {
```

```
                                        "ref": "PartitionResult"
                                    },
                                    "supportsDualStack"
                                ]

        }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }

                    ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

            "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    }
],
"type": "tree"
```

```
            },
            {
              "conditions": [],
              "error": "Invalid Configuration: Missing Region",
              "type": "error"
            }
          ]
        },
        "smithy.rules#endpointTests": {
          "testCases": [
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
              "expect":
{
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
```

```
        "endpoint":
{
            "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
           "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
```

```
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
false,
            "Endpoint": "https://example.com"
```

```
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true,
        "Endpoint": "https://example.com"
       }
    },
    {
      "documentation": "Missing region",
      "expect": {
        "error": "Invalid Configuration: Missing Region"
      }
    }
  ],
```

```
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
              "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The type of license server.</p>"
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
              "value": "PROVISIONED",
              "documentation": ""
            },
            {
              "name": "DELETING",
              "value": "DELETING",
              "documentation": ""
            },
            {
              "name": "DELETION_FAILED",
              "value": "DELETION_FAILED",
```

```
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
      "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
```

```
            "ServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
```

```
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "IdentityProviderSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n             <p>Product</p>\n          </li>\n          <li>\n             <p>DirectoryId</p>\n
</li>\n       </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderSummaries": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {

   "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
```

```
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
```

```
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
           "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

        }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
 "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for this product
```

```
user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

          "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
                }
            },
            "SubscriptionStartDate": {
                "target": "smithy.api#String",
```

```
                "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
                }
              },
              "SubscriptionEndDate": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
                }
              }
            },
            "traits": {
              "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
            "type": "list",
            "member": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
            "type": "structure",
            "members": {
              "RdsSalCredentialsProvider": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
                }
              }
            },
            "traits": {
              "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
            "type": "operation",
            "input": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
            },
            "output": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",

        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {
```

```
        "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                    "smithy.api#required": {}
                }
            }
        },

        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                "smithy.api#required": {}

             }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
          "type": "structure",
          "members": {
            "ProductUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {

   "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
        "smithy.api#http":
{
          "code": 200,
          "method": "POST",
          "uri": "/user/StopProductSubscription"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
```

```
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
            }
```

```
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
        <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n                <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n        </ul>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
            "AddSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
                    "smithy.api#required":
{}
                }
            },
            "RemoveSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
      }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
```

```
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)
```

```
// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
```

```
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
```

```
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
```

```
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
```

```
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
```

```
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
```

```
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
```

```
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //

```
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
```

```
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
```

```
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
```

```
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
```

```
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus
```

```
// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
```

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
"context"
"fmt"
awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
"github.com/aws/smithy-go/middleware"

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
```

```
nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
```

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
             }
           }
         },
         "traits": {
           "smithy.api#input": {}
         }
       },
       "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
         "type": "structure",
         "members": {},
         "traits": {
           "smithy.api#output": {}
         }
       },
       "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
         "type": "structure",
         "members": {
           "Name": {
             "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The type of name to filter by.</p>"
              }
           },
           "Values": {
             "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
               "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
             }
           },
           "Operator": {
             "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
             "traits": {
               "smithy.api#documentation": "<p>An operator for filtering results.</p>"
             }
           }
         },
         "traits": {
           "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
         }
       },
       "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
         "type":
```

```
"list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
"<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
```

```
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
              }
            },
            "Status": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
              }
            },
            "StatusMessage": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
              "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
              }
            },
            "HomeRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
          "type": "structure",
          "members": {
            "AmiId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
              }
            },
            "InstanceID": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
        },
        "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
```

```
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
          "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
          },
          "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

     "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
```

```
            "required": false,
            "documentation": "The AWS region used to dispatch the request.",
            "type": "String"
          },
          "UseDualStack": {
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
             "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

```
                        true
                    ]
                }

        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
```

```
{
  "conditions": [
    {
      "fn": "isSet",
      "argv": [
        {
          "ref": "Region"
        }
      ]
    }
  ],
  "rules": [
    {
      "conditions": [
        {

"fn": "aws.partition",
          "argv": [
            {
              "ref": "Region"
            }
          ],
          "assign": "PartitionResult"
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {

            "ref": "UseFIPS"
                },
                true
              ]
            },
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }
```

```
  ],
                                    "rules": [
                                      {
                                        "conditions": [
                                          {
                                            "fn": "booleanEquals",
                                            "argv": [
                                              true,
                                              {
                                                "fn": "getAttr",
                                                "argv": [
                                                  {
                                                    "ref": "PartitionResult"

                                  },
                                                    "supportsFIPS"
                                                ]
                                              }
                                            ]
                                          },
                                          {
                                            "fn": "booleanEquals",
                                            "argv": [
                                              true,
                                              {
                                                "fn": "getAttr",
                                                "argv": [

                                                 {
                                                    "ref": "PartitionResult"
                                                  },
                                                  "supportsDualStack"
                                                ]
                                              }
                                            ]
                                          }
                                        ],
                                        "rules": [
                                          {
                                            "conditions": [],

        "rules": [
                                              {
                                                "conditions": [],
                                                "endpoint": {
                                                  "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                  "properties": {},
```

```
                "headers": {}
              },
              "type": "endpoint"
            }
          ],

      "type": "tree"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [],
          "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
          "type": "error"
        }
      ],
      "type": "tree"
    },
    {

  "conditions": [
        {
          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseFIPS"
            },
            true
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {

    "fn": "booleanEquals",
              "argv": [
                {
                  "fn": "getAttr",
                  "argv": [
                    {
                      "ref": "PartitionResult"
                    },
                    "supportsFIPS"
                  ]
```

```
                    },
                    true

                ]
            }
        ],
        "rules": [
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "FIPS is enabled
but this partition does not support FIPS",
        "type": "error"
    }
  ],
  "type": "tree"
},
{
  "conditions": [
    {
      "fn": "booleanEquals",
      "argv": [
        {
          "ref": "UseDualStack"
        },
        true

    ]
    }
```

```
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {

                                            "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "rules": [

        {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"

                    }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
```

```
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ],
        "type": "tree"
    }
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {

      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

    },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
             },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": false
```

```
        }
      },
      {

  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

       },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
          }
        },
        "params": {
          "Region": "us-isob-east-1",
          "UseFIPS": true,
          "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },

    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
```

```
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
  "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
          },
          {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
          }
```

```
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
            "SourceRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "OrganizationIntegration": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
                "traits": {
                    "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
                <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
         "type": "structure",
         "members": {
            "Instances": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
               "traits": {
                  "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
         },
         "errors": [
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptions"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
```

```
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 16384
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
```

```
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
              "traits": {
                "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
```

```
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
         ],
         "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
               "method": "GET",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
         "type": "structure",
         "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}

               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
         "type": "structure",
         "members": {
            "tags": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
               }
            }
         },
```

```
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {

"name": "Disabled",
          "value": "Disabled",
          "documentation": "Disabled OrganizationIntegration"
        }
      ]
    }
  },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/RegisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
```

```
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            }
          }
         },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          },
          "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the subscription.</p>"
```

```
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n       Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n       Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
"list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
```

```
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
               "method": "DELETE",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
         "type": "structure",

    "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "tagKeys": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input":
 {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {

 "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/UpdateServiceSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
            "smithy.api#required":
{}
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home Region.</p>"
              }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
```

```
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
               "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
         }
      }
   }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity
on behalf of whom a Contribution has been received by Licensor and
subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
copyright license to reproduce, prepare Derivative Works of,

publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and

wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the

Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter

SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step

spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit

1.10 alpine-keys 2.5-r0

1.10.1 Available under license :

MIT License

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the “Software”), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED “AS IS”, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE
OR OTHER DEALINGS IN THE SOFTWARE.
Maintainer: Natanael Copa <ncopa@alpinelinux.org>
pkgname=alpine-keys
pkgver=2.5
pkgrel=0
pkgdesc="Public keys for Alpine Linux packages"
url="https://alpinelinux.org"
we install arch specific keys to /etc so we cannot do arch=noarch
arch="all"
license="MIT"
replaces="alpine-base"

1.11 stack 1.8.1

1.11.1 Available under license :

MIT
MIT License

Copyright (c) 2017 React Native Community

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is

furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR
IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.12 github.com/aws/aws-sdk-go-v2/service/s3 1.87.3

1.12.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry

```
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
  name: License Scan
  runs-on: ubuntu-latest
  strategy:
   matrix:
    python-version: [3.9]

  steps:
   - name: Checkout target
    uses: actions/checkout@v2
    with:
     path: sdkbase
     ref: ${{ github.base_ref }}
   - name: Checkout this ref
    uses: actions/checkout@v2
    with:
     path: new-ref
     fetch-depth: 0
   - name: Get Diff
```

```
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
       uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
```

```
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
```

```
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
```

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning

Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
{
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
```

```
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
```

```
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
```

```
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
```

```
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
     },
     "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
```

```
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

        }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
            "type": "structure",
            "members": {
                "Username": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                    }
                },
                "InstanceId": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                    }
                },
                "IdentityProvider": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                    "traits": {
                        "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                    }
                },
                "InstanceUserArn": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                    "traits": {
                        "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                    }
                },
                "Domain": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                    }
                }
            },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },

   "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
```

```
            },
            "Operation": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
               }
            },
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
         "type": "union",
         "members": {
            "ActiveDirectoryIdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
    "type": "list",
```

```
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
```

```
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },

      "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
          },
          "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
           "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

           "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
```

```
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
```

```
    {
      "fn": "isSet",
      "argv": [
        {
          "ref": "Endpoint"
        }
      ]
    }
  ],
 "rules": [
    {
      "conditions": [
        {
          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseFIPS"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [
        {

          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseDualStack"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [],
      "endpoint": {
        "url": {
          "ref": "Endpoint"
        },
```

```
        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "aws.partition",

                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseFIPS"
                                        },

true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
```

```
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

            ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
```

```
                                    "endpoint": {
                                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

    ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [

 {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "fn": "getAttr",
                                                "argv": [

                    {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsFIPS"
```

```
                                ]
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
```

```
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

            }
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

                        ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                        },
                        "type": "endpoint"
                    }
```

```
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ]
    },
    "smithy.rules#endpointTests": {
        "testCases": [
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",

        "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
```

```
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
```

```
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
```

```
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
```

```
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack":
false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
              "expect": {
                "endpoint": {
                  "url": "https://example.com"
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
               }
            },
            {
              "documentation": "Missing region",
```

```
                    "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
        "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
```

```
            }
        },
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>"
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
```

```
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
              "value": "PROVISIONED",
              "documentation": ""
            },
            {
              "name": "DELETING",
              "value": "DELETING",
```

```
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
    "type": "structure",
     "members": {
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
            }
        },
        "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
            "smithy.api#required": {}
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
 <ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
 </li>\n        </ul>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
 {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
```

```
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
```

```
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{ResourceArn}"
           },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
```

```
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
```

```
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

         }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
```

```
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

          "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                  "smithy.api#required": {}
               }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
```

```
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
              }
```

```
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
```

```
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
                "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
      "members": {
        "RdsSalSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
```

```
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                    "smithy.api#required": {}
                }
            }
        },

        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
```

```
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
             "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
```

```
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/StopProductSubscription"
            }
         }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
          }
        },
        "Product": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
          }
        },
        "ProductUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
          }
         }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
```

```
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
```

```
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
                }
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
        <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n                <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n        </ul>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
            "AddSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
                    "smithy.api#required":
```

```
{}
                }
            },
            "RemoveSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
```

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}
```

```
type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
```

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
```

```
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
```

```
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
```

```
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
```

```
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string
```

```
 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
```

```
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
```

```
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType
```

```
// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
```

```
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
```

```
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
```

```
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
```

```
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
```

```
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
```

```
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
```

```
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
```

ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

```
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
```

```
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
```

```
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
```

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },

    {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
             }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
```

```
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
```

```
        "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
               "traits": {
                  "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
               }
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
         "type": "structure",
         "members": {
            "AmiId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
               }
            },
            "InstanceID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
               }
            },
            "InstanceType": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The instance type of the resource.</p>"
               }
            },
            "AccountID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
```

```
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

   "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager Linux Subscriptions",
                 "arnNamespace": "license-manager-linux-subscriptions",
                "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
```

```
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
```

```
      "Endpoint": {
        "builtIn": "SDK::Endpoint",
        "required": false,
        "documentation": "Override the endpoint used to send this request",
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }

],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
```

```
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": {
                        "ref": "Endpoint"
                    },
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
```

```
                }
            ],
            "assign": "PartitionResult"
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {

                    "ref": "UseFIPS"
                        },
                        true
                    ]
                },
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }

],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"

},
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
```

```
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [

                                                     {
                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],

        "rules": [
                                                {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],

                                "type": "tree"
                                        }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
```

```
                                {

                "conditions": [
                                        {
                                           "fn": "booleanEquals",
                                           "argv": [
                                              {
                                                 "ref": "UseFIPS"
                                              },
                                              true
                                           ]
                                        }
                                     ],
                                     "rules": [
                                        {
                                           "conditions": [
                                              {

                              "fn": "booleanEquals",
                                                 "argv": [
                                                    {
                                                       "fn": "getAttr",
                                                       "argv": [
                                                          {
                                                             "ref": "PartitionResult"
                                                          },
                                                          "supportsFIPS"
                                                       ]
                                                    },
                                                    true

                                               ]
                                              }
                                           ],
                                           "rules": [
                                              {
                                                 "conditions": [],
                                                 "rules": [
                                                    {
                                                       "conditions": [],
                                                       "endpoint": {
                                                          "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                          "headers": {}
                                                       },
                                                       "type": "endpoint"
```

```
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled
but this partition does not support FIPS",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true

        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {

                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
```

```
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [

        {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                          "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
                      }
                    ],
                    "type": "tree"

                }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [],
                "endpoint": {
                  "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          }
        ],
```

```
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

  }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
```

```
                }
            },
            {
                "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled LinuxSubscriptionsDiscovery"
        },
        {
          "name": "Disabled",
          "value": "Disabled",
          "documentation": "Disabled LinuxSubscriptionsDiscovery"
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
    "type": "structure",
    "members": {
      "SourceRegions": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
        "traits": {
          "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
          "smithy.api#required": {}
        }
      },
      "OrganizationIntegration": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
        "traits": {
          "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
```

```
                "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
```

```
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
                <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 16384
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
```

```
        "members": {
            "Instances": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
```

```
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n        <p>The valid names for this filter are:</p>\n        <ul>\n            <li>\n              <p>\n                <code>Subscription</code>\n              </p>\n            </li>\n        </ul>\n        <p>The valid Operators for this filter are:</p>\n        <ul>\n          <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n            <p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n            <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken
       length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
```

```
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
```

```
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
```

```
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

            "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
             },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
```

```
                "min": 1,
                "max": 100
            }
        }
    },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
        },
        "Type": {
            "target": "smithy.api#String",
            "traits": {

 "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
        },
        "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
```

```
                "value": "INVALID",
                "documentation": "INVALID status"
              },
              {
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
```

```
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
```

```
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
      "type": "structure",
```

```
    "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
 {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
```

```
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
```

```
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
             }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
```

```
            "smithy.api#error": "client"
          }
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step

spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.13 shadow 4.16.0-r1

1.13.1 Available under license :

SPDX-License-Identifier: BSD-3-Clause

All files under this project either

1. fall under the BSD 3 clause license (by default).

2. carry an SPDX header declaring what license applies.

or

3. list a full custom license

This software is originally

```
* Copyright (c) 1989 - 1994, Julianne Frances Haugh

* All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the above copyright
*    notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*    notice, this list of conditions and the following disclaimer in the
*    documentation and/or other materials provided with the distribution.
* 3. The name of the copyright holders or contributors may not be used to
*    endorse or promote products derived from this software without
*    specific
 prior written permission.
*
* THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
* ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
* LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A
* PARTICULAR PURPOSE ARE DISCLAIMED.  IN NO EVENT SHALL THE COPYRIGHT
* HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
* LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
* DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
* THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
* OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
# Contributor: Patrycja Rosa <alpine@ptrcnull.me>
# Maintainer: Patrycja Rosa <alpine@ptrcnull.me>
pkgname=bsd-compat-headers
pkgver=0.7.2
pkgrel=6
pkgdesc="BSD compatibility headers (cdefs, queue, tree)"
url="https://gitlab.alpinelinux.org/alpine/aports"
arch="noarch"
license="BSD-2-Clause AND BSD-3-Clause"
source="
 cdefs.h
 queue.h
 tree.h
"
builddir="$srcdir"
options="!check" # just headers

package() {
 mkdir -p "$pkgdir"
```

```
 install -Dm644 -t "$pkgdir"/usr/include/sys \
  cdefs.h queue.h tree.h
}
sha512sums="
37c8fc73c7aea7b490f7850927e2bb91d12137c9e59e22c084146d515696dbc7973b5de92f4c987ba080dd2502ba8312
7006442c3f019b6447a620c0cae73178  cdefs.h
2f0d5e6e4dc3350285cf17009265dddcbe12431c111868eea39bc8cb038ab7c1f2acacbb21735c4e9d4a1fd106a8fc0f86
11ea33987d4faba37dde5ce6da0750  queue.h
d9ac210d81feb8ad2655bc80fb065d3fe20ae4417b32b4a1711e6738a4870140005c13373b5d1846ef3ce5ae6da45f2da
cef2092881eded0a2e94f6a07752ef3  tree.h
"
# Automatically generated by apkbuild-cpan, template 4
# Contributor: Valery Kartel <valery.kartel@gmail.com>
# Maintainer: Celeste <cielesti@protonmail.com>
maintainer="Celeste <cielesti@protonmail.com>"
pkgname=perl-bsd-resource
pkgver=1.2911
pkgrel=10
#_pkgreal is used by apkbuild-cpan to find modules at MetaCpan
_pkgreal=BSD-Resource
pkgdesc="Perl extension implements the BSD process resource limit functions"
url="https://metacpan.org/release/BSD-Resource/"
arch="all"
license="Artistic-2.0 OR LGPL-2.0"
depends="perl"
makedepends="perl-dev"
subpackages="$pkgname-doc"
source="https://cpan.metacpan.org/authors/id/J/JH/JHI/BSD-Resource-$pkgver.tar.gz"
builddir="$srcdir/$_pkgreal-$pkgver"

build() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 PERL_MM_USE_DEFAULT=1 perl -I. Makefile.PL \
  INSTALLDIRS=vendor \
  NO_PACKLIST=1 \
  NO_PERLLOCAL=1
 make
}

check() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 make test
}

package() {
 make DESTDIR="$pkgdir" install
}
```

```
sha512sums="
d0032d41c7c0468ed1c6d8f57b885f6cb97a5039d754c8cb60b2067daedaf53bd15fb6561a3d0f828df16dfa5417f663b
8065ba65f4fea16dc9262728b3b6b85
  BSD-Resource-1.2911.tar.gz
"
# Contributor: Fabian Affolter <fabian@affolter-engineering.ch>
# Maintainer: Fabian Affolter <fabian@affolter-engineering.ch>
pkgname=py3-flake8-copyright
_pkgname=flake8-copyright
pkgver=0.2.4
pkgrel=3
pkgdesc="Extension for flake8 which checks for copyrights"
options="!check" # No testsuite
url="https://github.com/savoirfairelinux/flake8-copyright"
arch="noarch"
license="MIT"
depends="py3-flake8 py3-setuptools"
makedepends="py3-gpep517 py3-wheel"
subpackages="$pkgname-pyc"
source="https://files.pythonhosted.org/packages/source/${_pkgname:0:1}/$_pkgname/$_pkgname-$pkgver.tar.gz"
builddir="$srcdir"/$_pkgname-$pkgver

replaces="py-flake8-copyright"                  # Backwards compatibility
provides="py-flake8-copyright=$pkgver-r$pkgrel" # Backwards compatibility

build() {
 gpep517 build-wheel \
  --wheel-dir .dist \
  --output-fd 3 3>&1 >&2
}

package() {
 gpep517 install-wheel --destdir "$pkgdir" \
  .dist/*.whl
}

sha512sums="
a6ab47e1bb715618f075c51f398e18180404871b3b0faf1c2d30701d5203db6bc23771bf22ffb5bafcd8ee856b9b64237
b316bd503ae7dceed6ca284ccd5a74d
  flake8-copyright-0.2.4.tar.gz
"
# Contributor: Dhruvin Gandhi <contact@dhru.vin>
# Maintainer: Patrycja Rosa <alpine@ptrcnull.me>
pkgname=py3-license-expression
_pkgname=license_expression
pkgver=30.4.0
pkgrel=0
pkgdesc="Library to parse, compare, simplify and normalize license expressions"
```

```
url="https://github.com/nexB/license-expression"
arch="noarch"
license="Apache-2.0"
depends="python3 py3-boolean.py"
makedepends="py3-setuptools py3-setuptools_scm py3-gpep517 py3-wheel"
checkdepends="py3-pytest py3-pytest-xdist"
subpackages="$pkgname-pyc"
source="https://files.pythonhosted.org/packages/source/l/$_pkgname/$_pkgname-$pkgver.tar.gz"
builddir="$srcdir/$_pkgname-$pkgver"

build() {
 gpep517 build-wheel \
  --wheel-dir .dist \
  --output-fd 3 3>&1 >&2
}

check() {
 python3 -m venv --clear --without-pip --system-site-packages .testenv
 .testenv/bin/python3 -m installer .dist/*.whl
 .testenv/bin/python3 -m pytest
}

package() {
 python3 -m installer -d "$pkgdir" \
  .dist/*.whl
}

sha512sums="
cc7cd6b5bd8ea4c99b66f074871ffd7cc78b3e8b1b0d3afd9b95efdb7147c8293db2fac977d684fc34d3d60bd79066a06
dc2bff0a38b130d9d83c63538502db1
  license_expression-30.4.0.tar.gz
"
```

License

All new source code committed to the shadow project is assumed to be made
available under the [BSD-3-Clause](../../COPYING) license unless the submitter
specifies another license at that time. The shadow maintainers reserve the
right to refuse a submission if the license is deemed incompatible with the
goals of the project.

Note: old code may be made available under another license, check the
license tag for each file to get additional information.

```
# Contributor: Maxim Karasev <begs@disroot.org>
# Maintainer: mio <miyopan@e.email>
pkgname=bsd-games
pkgver=3.3
pkgrel=2
pkgdesc="traditional text mode games from BSD"
```

```
url="https://bsd-games.sourceforge.io/"
arch="all"
license="BSD-3-Clause"
install="$pkgname.post-install"
makedepends="ncurses-dev coreutils" # configure causes busybox expr error
subpackages="$pkgname-doc"
source="https://sourceforge.net/projects/bsd-games/files/bsd-games-$pkgver.tar.gz
 0001-bsd-games-scores-dir.patch
 "
options="!check" # no tests

build() {
 # some GNU autoconf options are ignored, but it works
 ./configure \
  --build=$CBUILD \
  --host=$CHOST \
  --prefix=/usr \
  --sysconfdir=/etc \
  --mandir=/usr/share/man \
  --scoredir=/usr/share/$pkgname
 make
}

package() {
 make DESTDIR="$pkgdir" install
 install -Dm644 LICENSE "$pkgdir"/usr/share/licenses/bsd-games/LICENSE
}

sha512sums="
aaf36d09d4fe68514a5c279063d7e77a9a9a84c447037cba974b29faa07eb80c2aab2379d0699c196b5c27ffe1b2bb2c6
8d3390143e0e62d5e3d210ccfb61294
  bsd-games-3.3.tar.gz
e1def0d4835a877242c4173fae862e278a7858738e0bacacbb045a42bcabec2aa7c72d000bbd2421ce35fe66cdc1f52c0
577b7e278029ca5ed50f7aab22319f6  0001-bsd-games-scores-dir.patch
"
# Contributor: Carlo Landmeter <clandmeter@alpinelinux.org>
# Maintainer: Kevin Daudt <kdaudt@alpinelinux.org>
pkgname=spdx-licenses
pkgver=3.24.0
pkgrel=0
pkgdesc="Various data formats for the SPDX License List"
url="https://spdx.org/"
arch="noarch"
options="!check" # no test suite
license="CC-BY-3.0"
source="license-list-data-$pkgver.tar.gz::https://github.com/spdx/license-list-data/archive/v$pkgver.tar.gz"
builddir="$srcdir/license-list-data-$pkgver"
subpackages="$pkgname-list"
```

```
_types="html json rdfa rdfnt rdfturtle rdfxml template text"

for type in $_types; do
 subpackages="$subpackages $pkgname-$type:_subpkg"
done

package() {
 mkdir -p "$pkgdir"
}

_subpkg() {
 local type=${subpkgname/$pkgname-/}
 pkgdesc="$pkgdesc ($type)"
 install_if="$pkgname=$pkgver-r$pkgrel"
 mkdir -p "$subpkgdir"/usr/share/spdx
 cp -r "$builddir"/$type "$subpkgdir"/usr/share/spdx/
}

list() {
 pkgdesc="$pkgdesc (licence list)"
 mkdir -p "$subpkgdir"/usr/share/spdx
 local i; for i in "$builddir"/text/*.txt;
 do
  local license=${i##*/}
  echo ${license%.*} >> "$subpkgdir"/usr/share/spdx/license.lst
 done
}

sha512sums="
6eb81424e1b3173dbd8e17859b2e15dfe1c2af8f4da59b7dad0729c038a4cbdba95c34c2c546285fcdbbd41562e39575e
6a6ebb9463b70121e0a12b99d1307e7  license-list-data-3.24.0.tar.gz
"
```

mini_sendmail - accept email on behalf of real sendmail

Copyright 1999,2015 by Jef Poskanzer <jef@mail.acme.com>.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND

ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING,
BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.14 github.com/aws/aws-sdk-go-v2/service/ssooidc 1.34.2

1.14.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader

```
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string

 // Product name.
 //
```

```
 // This member is required.
 ProductName *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // Date and time range during which the license is valid, in ISO8601-UTC format.
 //
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]
```

```
jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
     # compare
     - name: License test
       run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
```

CheckoutBorrowLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever

InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
```

```
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
```

```
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
```

```
        "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

        {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
      "type": "structure",
      "members": {
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
            "smithy.api#required": {}
          }
        },
        "LicenseServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
      "type": "structure",
      "members": {
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
          }
        },
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/DeregisterIdentityProvider"
```

```
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
```

```
        "traits": {
            "smithy.api#output": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
```

```
            "uri": "/user/DisassociateUser"
          },
          "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummary":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
      "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
            "smithy.api#length": {
              "min": 1
            },

  "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Attribute": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
          }
        },
        "Operation": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
        },
        "Value": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#FilterList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
    "type": "union",
    "members": {
        "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
                "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
    "type": "structure",
    "members": {
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
          "type": "list",
```

```
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },

    "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                 }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "AssociationDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
              }
            },
            "DisassociationDate": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
```

```
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

       "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
```

```
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
              "UseFIPS": {
                "builtIn": "AWS::UseFIPS",
                "required": true,
                "default": false,
                "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                "type": "Boolean"
              },
              "Endpoint": {
                "builtIn": "SDK::Endpoint",
                "required": false,
                "documentation": "Override the endpoint used to send this request",
                "type": "String"
              }
            },
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "isSet",
```

```
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [
              {

                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "endpoint": {
              "url": {
                "ref": "Endpoint"
              },

      "properties": {},
              "headers": {}
```

```
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "isSet",
                "argv": [
                    {
                        "ref": "Region"
                    }
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "aws.partition",

                        "argv": [
                            {
                                "ref": "Region"
                            }
                        ],
                        "assign": "PartitionResult"
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseFIPS"
                                    },

true
                                ]
                            },
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
```

```
                "ref": "UseDualStack"
              },
              true
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
"fn": "booleanEquals",
                "argv": [
                  true,
                  {
                    "fn": "getAttr",
                    "argv": [
                      {
                        "ref": "PartitionResult"
                      },
                      "supportsFIPS"
                    ]
                  }
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  true,
                  {
                    "fn": "getAttr",
                    "argv": [
                      {
                        "ref": "PartitionResult"
                      },
                      "supportsDualStack"
                    ]
                  }
        ]
              }
            ],
            "rules": [
              {
                "conditions": [],
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-
```

```
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

    ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [

 {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "fn": "getAttr",
                                                "argv": [

                    {
                                                        "ref": "PartitionResult"
                                                    },
                                                    "supportsFIPS"
                                                ]
                                            },
```

```
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

}
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {

    "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
```

```
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]

            }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }

                    ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
```

```
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "Invalid Configuration: Missing Region",
                  "type": "error"
                }
              ]
            },
            "smithy.rules#endpointTests": {
              "testCases": [
                {
                  "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                  "expect":
{
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",

        "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                    }
                  },
```

```
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
```

```
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
         "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                "UseDualStack":
false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
              "expect": {
                "endpoint": {
                  "url": "https://example.com"
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",
              "expect": {
                "error": "Invalid Configuration: Missing Region"
```

```
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
        "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
        },
```

```
            "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of license server.</p>"
               }
            },
            "ServerEndpoint": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
               }
            },
            "LicenseServerEndpointId": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
               }
            },
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
               }
            },
            "LicenseServerEndpointProvisioningStatus": {
               "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
               }
            },
            "LicenseServers": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
               }
```

```
            },
            "CreationTime": {
               "target": "smithy.api#Timestamp",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
         "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "PROVISIONING",
                  "value": "PROVISIONING",
                  "documentation": ""
               },
               {
                  "name": "PROVISIONING_FAILED",

                 "value": "PROVISIONING_FAILED",
                  "documentation": ""
               },
               {
                  "name": "PROVISIONED",
                  "value": "PROVISIONED",
                  "documentation": ""
               },
               {
                  "name": "DELETING",
                  "value": "DELETING",
                  "documentation": ""
               },
```

```
            {
              "name": "DELETION_FAILED",
              "value": "DELETION_FAILED",
              "documentation": ""
            },
            {
              "name": "DELETED",
              "value": "DELETED",
              "documentation": ""
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "HEALTHY",
              "value": "HEALTHY",
              "documentation": ""
            },
            {
              "name": "UNHEALTHY",
              "value": "UNHEALTHY",
              "documentation": ""
            },
            {
              "name": "NOT_APPLICABLE",
              "value": "NOT_APPLICABLE",
              "documentation": ""
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
    ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
```

```
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
```

```
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoints": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "IdentityProvider": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
```

empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects. "
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": " Returns the list of tags for the specified resource. ",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": " The Amazon Resource Name (ARN) of the resource whose tags you want to retrieve. ",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n        <p>Status</p>\n        </li>\n        <li>\n        <p>Username</p>\n
</li>\n        <li>\n        <p>Domain</p>\n        </li>\n        </ul>"

          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
          }
        },
        "NextToken": {
          "target":
 "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {

          "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                "smithy.api#required": {}
              }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
```

```
                "target": "smithy.api#String",
                "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
                }
              },
              "SubscriptionEndDate": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
                }
              }
            },
            "traits": {
              "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
            "type": "list",
            "member": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
            "type": "structure",
            "members": {
              "RdsSalCredentialsProvider": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
                }
              }
            },
            "traits": {
              "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
            "type": "operation",
            "input": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
            },
            "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
              }
            },
```

```
        "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
```

```
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
          "type": "structure",
          "members": {
            "SecretId": {
              "target": "smithy.api#String",

          "traits": {
                  "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains credentials.</p>",
                  "smithy.api#length": {
                    "min": 1
                  }
                }
              }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
              "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
          "type": "structure",
```

```
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
   <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/StartProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
```

```
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StringList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
           },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
          },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
 {
        "type": "structure",
```

```
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
```

```
update.</p>"
                }
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
        <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n                <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n        </ul>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
            "AddSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
                    "smithy.api#required":
{}
                }
            },
            "RemoveSubnets": {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
```

```
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
```

```
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
```

```
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
```

```
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
```

```
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {
```

```
 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
```

```
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
```

```
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata
```

```
 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
```

```
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string
```

```
 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
```

```
 return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
```

```
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData
```

```
// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}
```

```
type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
```

```
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string
```

```
 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
```

```
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
```

```
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
```

Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.

```
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {
```

```
 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
```

```
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
```

```
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
```

Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },

        {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation":
"<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

        "traits": {
                    "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
```

```
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
```

```
            "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
        },
        "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
        },
        "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
        },
        "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
```

```
            "Region": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
               }
            },
            "UsageOperation": {
               "target": "smithy.api#String",

   "traits": {
                  "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
               }
            },
            "ProductCode": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
               "traits": {
                  "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
               }
            },
            "LastUpdatedTime": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
               }
            },
            "SubscriptionName": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
               }
            },
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
```

```
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
                }
            },
            "SubscriptionProviderUpdateTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
                }
            },
            "DualSubscription": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
                }
            },
            "RegisteredWithSubscriptionProvider": {
                "target": "smithy.api#String",
                "traits": {

      "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
       },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
      }
    ],
    "traits": {
      "aws.api#service": {
        "sdkId": "License Manager Linux Subscriptions",
         "arnNamespace": "license-manager-linux-subscriptions",
        "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
      },
      "aws.auth#sigv4": {
        "name": "license-manager-linux-subscriptions"
```

```
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
        "x-amzn-trace-id"
      ],
      "additionalExposedHeaders": [
        "x-amzn-errortype",
        "x-amzn-requestid",
        "x-amzn-trace-id"
      ]
    },
    "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
    "smithy.api#title": "AWS License Manager Linux Subscriptions",
    "smithy.rules#endpointRuleSet": {
      "version": "1.0",
      "parameters": {
        "Region": {
          "builtIn": "AWS::Region",
          "required": false,
          "documentation": "The AWS region used to dispatch the request.",
          "type": "String"
        },
        "UseDualStack": {
          "builtIn": "AWS::UseDualStack",
          "required": true,
          "default": false,
          "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
           "type": "Boolean"
        },
        "UseFIPS": {
          "builtIn": "AWS::UseFIPS",
          "required": true,
          "default": false,
          "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
          "type": "Boolean"
        },
        "Endpoint": {
          "builtIn": "SDK::Endpoint",
          "required": false,
```

```
        "documentation": "Override the endpoint used to send this request",
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }

],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
```

```
}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {

            "fn": "aws.partition",
                                    "argv": [
                                        {
                                            "ref": "Region"
                                        }
                                    ],
```

```
                "assign": "PartitionResult"
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {

                    "ref": "UseFIPS"
                            },
                            true
                        ]
                    },
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }

],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"

        },
                                    "supportsFIPS"
                                ]
                            }
                        ]
                    },
                    {
                        "fn": "booleanEquals",
```

```
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
                                            "argv": [

                                             {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
                                            ]
                                        }
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],

        "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],

                        "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
```

```
            "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {

          "fn": "booleanEquals",
                      "argv": [
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        },
                        true

                    ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "rules": [
                        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                            "headers": {}
                          },
                          "type": "endpoint"
                        }
                      ],
```

```
                        "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS is enabled
but this partition does not support FIPS",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [
                    {
                        "ref": "UseDualStack"
                    },
                    true

]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            true,
                            {
                                "fn": "getAttr",
                                "argv": [
                                    {

                                    "ref": "PartitionResult"
                                    },
                                    "supportsDualStack"
                                ]
                            }
                        ]
                    }
                ],
                "rules": [
```

```
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],
                                            "type": "tree"

                                }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
```

```
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ],
        "type": "tree"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

  }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
              }

        },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
```

```
            }

        },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }

        },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
```

```
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },

    {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {

      "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
          "expect": {
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true,
            "Endpoint": "https://example.com"
          }
```

```
                },
                {
                  "documentation": "Missing region",

                "expect": {
                      "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
   <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
   <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
          <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
```

```
            "Instances": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
               "traits": {
                  "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
```

```
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
              "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n more sets of key-value pairs that you specify. For example, you can filter by the name of\n <code>Subscription</code> with an optional operator to see subscriptions that match,\n partially match, or don't match a certain subscription's name.</p>\n <p>The valid names for this filter are:</p>\n <ul>\n <li>\n <p>\n <code>Subscription</code>\n </p>\n </li>\n </ul>\n <p>The valid Operators for this filter are:</p>\n <ul>\n <li>\n <p>\n <code>contains</code>\n </p>\n </li>\n <li>\n <p>\n <code>equals</code>\n </p>\n </li>\n <li>\n <p>\n <code>Notequal</code>\n </p>\n </li>\n </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
```

```
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
```

```
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
        },
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
        "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
        },
        "smithy.api#readonly": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
```

```
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
            "value": "Contains",
```

```
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                 "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {

             "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {

                "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
             },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
```

```
            }
          }
        },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          },
          "smithy.api#uniqueItems": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

          "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n        Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n        Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "ACTIVE",
              "value": "ACTIVE",
              "documentation": "ACTIVE status"
            },
            {
              "name": "INVALID",
              "value": "INVALID",
              "documentation": "INVALID status"
```

```
            },
            {
              "name": "PENDING",
              "value": "PENDING",
              "documentation": "PENDING status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
```

```
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
```

```
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",
```

```
    "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "tagKeys": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input":
{}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
```

```
  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
          "members": {
```

```
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
                }
             }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
```

```
        }
      }
    }
  }
```

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial

revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.15 node.js 22.15.1-r0

1.15.1 Available under license :

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/ui.h.in
*
* Copyright 2001-2020 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/
```

```
#ifndef OPENSSL_UI_H
# define OPENSSL_UI_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_UI_H
# endif

# include <openssl/opensslconf.h>

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  include <openssl/crypto.h>
# endif
# include <openssl/safestack.h>
# include <openssl/pem.h>
# include <openssl/types.h>
# include <openssl/uierr.h>

/* For compatibility reasons, the macro OPENSSL_NO_UI is currently retained */
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  ifdef OPENSSL_NO_UI_CONSOLE
#   define OPENSSL_NO_UI
#  endif
# endif

# ifdef  __cplusplus
extern
 "C" {
# endif

/*
* All the following functions return -1 or NULL on error and in some cases
* (UI_process()) -2 if interrupted or in some other way cancelled. When
* everything is fine, they return 0, a positive value or a non-NULL pointer,
* all depending on their purpose.
*/

/* Creators and destructor.   */
UI *UI_new(void);
UI *UI_new_method(const UI_METHOD *method);
void UI_free(UI *ui);

/*-
  The following functions are used to add strings to be printed and prompt
  strings to prompt for data.  The names are UI_{add,dup}_<function>_string
  and UI_{add,dup}_input_boolean.
```

```
 UI_{add,dup}_<function>_string have the following meanings:
     add     add a text or prompt string.  The pointers given to these
             functions are used verbatim, no copying is done.
     dup     make a copy of the text or prompt string, then add the copy
             to the collection of strings in the user interface.
     <function>
             The function
 is a name for the functionality that the given
             string shall be used for.  It can be one of:
                 input   use the string as data prompt.
                 verify  use the string as verification prompt.  This
                         is used to verify a previous input.
                 info    use the string for informational output.
                 error   use the string for error output.
  Honestly, there's currently no difference between info and error for the
  moment.

  UI_{add,dup}_input_boolean have the same semantics for "add" and "dup",
  and are typically used when one wants to prompt for a yes/no response.

  All of the functions in this group take a UI and a prompt string.
  The string input and verify addition functions also take a flag argument,
  a buffer for the result to end up with, a minimum input size and a maximum
  input size (the result buffer MUST be large enough to be able to contain
  the
 maximum number of characters).  Additionally, the verify addition
  functions takes another buffer to compare the result against.
  The boolean input functions take an action description string (which should
  be safe to ignore if the expected user action is obvious, for example with
  a dialog box with an OK button and a Cancel button), a string of acceptable
  characters to mean OK and to mean Cancel.  The two last strings are checked
  to make sure they don't have common characters.  Additionally, the same
  flag argument as for the string input is taken, as well as a result buffer.
  The result buffer is required to be at least one byte long.  Depending on
  the answer, the first character from the OK or the Cancel character strings
  will be stored in the first byte of the result buffer.  No NUL will be
  added, so the result is *not* a string.

  On success, the all return an index of the added information.  That index
  is useful when retrieving results with UI_get0_result().
 */
 int UI_add_input_string(UI *ui, const char *prompt, int flags,
                         char *result_buf, int minsize, int maxsize);
 int UI_dup_input_string(UI *ui, const char *prompt, int flags,
                         char *result_buf, int minsize, int maxsize);
 int UI_add_verify_string(UI *ui, const char *prompt, int flags,
                          char *result_buf, int minsize, int maxsize,
                          const char *test_buf);
```

```
int UI_dup_verify_string(UI *ui, const char *prompt, int flags,
                         char *result_buf, int minsize, int maxsize,
                         const char *test_buf);
int UI_add_input_boolean(UI *ui, const char *prompt, const char *action_desc,
                         const char *ok_chars, const char *cancel_chars,
                         int flags, char *result_buf);
int UI_dup_input_boolean(UI *ui, const char *prompt, const char *action_desc,
                         const char *ok_chars, const char *cancel_chars,
                          int flags, char *result_buf);
int UI_add_info_string(UI *ui, const char *text);
int UI_dup_info_string(UI *ui, const char *text);
int UI_add_error_string(UI *ui, const char *text);
int UI_dup_error_string(UI *ui, const char *text);

/* These are the possible flags.  They can be or'ed together. */
/* Use to have echoing of input */
# define UI_INPUT_FLAG_ECHO             0x01
/*
* Use a default password.  Where that password is found is completely up to
* the application, it might for example be in the user data set with
* UI_add_user_data().  It is not recommended to have more than one input in
* each UI being marked with this flag, or the application might get
* confused.
*/
# define UI_INPUT_FLAG_DEFAULT_PWD      0x02

/*-
* The user of these routines may want to define flags of their own.  The core
* UI won't look at those, but will pass them on to the method routines.  They
* must use higher bits so they don't get confused with the UI bits above.
 * UI_INPUT_FLAG_USER_BASE tells which is the lowest bit to use.  A good
* example of use is this:
*
*    #define MY_UI_FLAG1       (0x01 << UI_INPUT_FLAG_USER_BASE)
*
*/
# define UI_INPUT_FLAG_USER_BASE 16

/*-
* The following function helps construct a prompt.
* phrase_desc is a textual short description of the phrase to enter,
* for example "pass phrase", and
* object_name is the name of the object
* (which might be a card name or a file name) or NULL.
* The returned string shall always be allocated on the heap with
* OPENSSL_malloc(), and need to be free'd with OPENSSL_free().
*
* If the ui_method doesn't contain a pointer to a user-defined prompt
```

```
* constructor, a default string is built, looking like this:
*
*       "Enter {phrase_desc} for {object_name}:"
*
* So, if phrase_desc has the value "pass phrase" and object_name has
* the value "foo.key", the resulting string is:
*
*       "Enter pass phrase for foo.key:"
*/
char *UI_construct_prompt(UI *ui_method,
                          const char *phrase_desc, const char *object_name);

/*
* The following function is used to store a pointer to user-specific data.
* Any previous such pointer will be returned and replaced.
*
* For callback purposes, this function makes a lot more sense than using
* ex_data, since the latter requires that different parts of OpenSSL or
* applications share the same ex_data index.
*
* Note that the UI_OpenSSL() method completely ignores the user data. Other
* methods may not, however.
*/
void *UI_add_user_data(UI *ui, void *user_data);
/*
* Alternatively, this function is used to duplicate the user data.
* This uses the duplicator method function.  The destroy function will
* be used to free the user data in this case.
*/
int UI_dup_user_data(UI *ui, void *user_data);
/* We need a user data retrieving function as well.  */
void *UI_get0_user_data(UI *ui);

/* Return the result associated with a prompt given with the index i. */
const char *UI_get0_result(UI
 *ui, int i);
int UI_get_result_length(UI *ui, int i);

/* When all strings have been added, process the whole thing. */
int UI_process(UI *ui);

/*
* Give a user interface parameterised control commands.  This can be used to
* send down an integer, a data pointer or a function pointer, as well as be
* used to get information from a UI.
*/
int UI_ctrl(UI *ui, int cmd, long i, void *p, void (*f) (void));
```

```
/* The commands */
/*
* Use UI_CONTROL_PRINT_ERRORS with the value 1 to have UI_process print the
* OpenSSL error stack before printing any info or added error messages and
* before any prompting.
*/
# define UI_CTRL_PRINT_ERRORS           1
/*
* Check if a UI_process() is possible to do again with the same instance of
* a user interface.  This makes UI_ctrl() return 1 if it is redoable, and 0
* if not.
*/
# define UI_CTRL_IS_REDOABLE            2

/* Some methods may use extra data */
# define UI_set_app_data(s,arg)         UI_set_ex_data(s,0,arg)
# define UI_get_app_data(s)
          UI_get_ex_data(s,0)

# define UI_get_ex_new_index(l, p, newf, dupf, freef) \
  CRYPTO_get_ex_new_index(CRYPTO_EX_INDEX_UI, l, p, newf, dupf, freef)
int UI_set_ex_data(UI *r, int idx, void *arg);
void *UI_get_ex_data(const UI *r, int idx);

/* Use specific methods instead of the built-in one */
void UI_set_default_method(const UI_METHOD *meth);
const UI_METHOD *UI_get_default_method(void);
const UI_METHOD *UI_get_method(UI *ui);
const UI_METHOD *UI_set_method(UI *ui, const UI_METHOD *meth);

# ifndef OPENSSL_NO_UI_CONSOLE

/* The method with all the built-in thingies */
UI_METHOD *UI_OpenSSL(void);

# endif

/*
* NULL method.  Literally does nothing, but may serve as a placeholder
* to avoid internal default.
*/
const UI_METHOD *UI_null(void);

/* ---------- For method writers ---------- */
/*-
  A method contains a number of functions that implement the low level
  of the User Interface.  The functions are:
```

an opener This function starts a session, maybe by opening a channel to a tty, or by opening a window.

a writer This function is called to write a given string, maybe to the tty, maybe as a field label in a window.

a flusher This function is called to flush everything that has been output so far. It can be used to actually display a dialog box after it has been built.

a reader This function is called to read a given prompt, maybe from the tty, maybe from a field in a window. Note that it's called with all string structures, not only the prompt ones, so it must check such things itself.

a closer This function closes the session, maybe by closing the channel to the tty, or closing the window.

All these functions are expected to return:

0 on error.

1 on success.

-1 on out-of-band events, for example if some prompting has been canceled (by pressing Ctrl-C, for example). This is only checked when returned by the flusher or the reader.

The way this is used, the opener is first called, then the writer for all strings, then the flusher, then the reader for all strings and finally the closer. Note that if you want to prompt from a terminal or other command line interface, the best is to have the reader also write the prompts instead of having the writer do it. If you want to prompt from a dialog box, the writer can be used to build up the contents of the box, and the flusher to actually display the box and run the event loop until all data has been given, after which the reader only grabs the given data and puts them back into the UI strings.

All method functions take a UI as argument. Additionally, the writer and the reader take a UI_STRING.
*/

```
/*
* The UI_STRING type is the data structure that contains all the needed info
* about a string or a prompt, including test data for a verification prompt.
*/
typedef struct ui_string_st UI_STRING;

SKM_DEFINE_STACK_OF_INTERNAL(UI_STRING, UI_STRING, UI_STRING)
```

```
#define sk_UI_STRING_num(sk) OPENSSL_sk_num(ossl_check_const_UI_STRING_sk_type(sk))
#define sk_UI_STRING_value(sk, idx) ((UI_STRING
*)OPENSSL_sk_value(ossl_check_const_UI_STRING_sk_type(sk), (idx)))
#define sk_UI_STRING_new(cmp) ((STACK_OF(UI_STRING)
*)OPENSSL_sk_new(ossl_check_UI_STRING_compfunc_type(cmp)))
#define sk_UI_STRING_new_null() ((STACK_OF(UI_STRING) *)OPENSSL_sk_new_null())
#define sk_UI_STRING_new_reserve(cmp, n) ((STACK_OF(UI_STRING)
*)OPENSSL_sk_new_reserve(ossl_check_UI_STRING_compfunc_type(cmp), (n)))
#define sk_UI_STRING_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_UI_STRING_sk_type(sk), (n))
#define sk_UI_STRING_free(sk) OPENSSL_sk_free(ossl_check_UI_STRING_sk_type(sk))
#define
 sk_UI_STRING_zero(sk) OPENSSL_sk_zero(ossl_check_UI_STRING_sk_type(sk))
#define sk_UI_STRING_delete(sk, i) ((UI_STRING *)OPENSSL_sk_delete(ossl_check_UI_STRING_sk_type(sk),
(i)))
#define sk_UI_STRING_delete_ptr(sk, ptr) ((UI_STRING
*)OPENSSL_sk_delete_ptr(ossl_check_UI_STRING_sk_type(sk), ossl_check_UI_STRING_type(ptr)))
#define sk_UI_STRING_push(sk, ptr) OPENSSL_sk_push(ossl_check_UI_STRING_sk_type(sk),
ossl_check_UI_STRING_type(ptr))
#define sk_UI_STRING_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_UI_STRING_sk_type(sk),
ossl_check_UI_STRING_type(ptr))
#define sk_UI_STRING_pop(sk) ((UI_STRING *)OPENSSL_sk_pop(ossl_check_UI_STRING_sk_type(sk)))
#define sk_UI_STRING_shift(sk) ((UI_STRING *)OPENSSL_sk_shift(ossl_check_UI_STRING_sk_type(sk)))
#define sk_UI_STRING_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_UI_STRING_sk_type(sk),ossl_check_UI_STRING_freefunc_type(freefunc))
#define sk_UI_STRING_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_UI_STRING_sk_type(sk),
 ossl_check_UI_STRING_type(ptr), (idx))
#define sk_UI_STRING_set(sk, idx, ptr) ((UI_STRING *)OPENSSL_sk_set(ossl_check_UI_STRING_sk_type(sk),
(idx), ossl_check_UI_STRING_type(ptr)))
#define sk_UI_STRING_find(sk, ptr) OPENSSL_sk_find(ossl_check_UI_STRING_sk_type(sk),
ossl_check_UI_STRING_type(ptr))
#define sk_UI_STRING_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_UI_STRING_sk_type(sk),
ossl_check_UI_STRING_type(ptr))
#define sk_UI_STRING_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_UI_STRING_sk_type(sk),
ossl_check_UI_STRING_type(ptr), pnum)
#define sk_UI_STRING_sort(sk) OPENSSL_sk_sort(ossl_check_UI_STRING_sk_type(sk))
#define sk_UI_STRING_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_UI_STRING_sk_type(sk))
#define sk_UI_STRING_dup(sk) ((STACK_OF(UI_STRING)
*)OPENSSL_sk_dup(ossl_check_const_UI_STRING_sk_type(sk)))
#define sk_UI_STRING_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(UI_STRING)
*)OPENSSL_sk_deep_copy(ossl_check_const_UI_STRING_sk_type(sk),
ossl_check_UI_STRING_copyfunc_type(copyfunc),
 ossl_check_UI_STRING_freefunc_type(freefunc)))
#define sk_UI_STRING_set_cmp_func(sk, cmp)
((sk_UI_STRING_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_UI_STRING_sk_type(sk),
ossl_check_UI_STRING_compfunc_type(cmp)))



/*
```

```
* The different types of strings that are currently supported. This is only
* needed by method authors.
*/
enum UI_string_types {
  UIT_NONE = 0,
  UIT_PROMPT,               /* Prompt for a string */
  UIT_VERIFY,               /* Prompt for a string and verify */
  UIT_BOOLEAN,              /* Prompt for a yes/no response */
  UIT_INFO,                 /* Send info to the user */
  UIT_ERROR                 /* Send an error message to the user */
};

/* Create and manipulate methods */
UI_METHOD *UI_create_method(const char *name);
void UI_destroy_method(UI_METHOD *ui_method);
int UI_method_set_opener(UI_METHOD *method, int (*opener) (UI *ui));
int UI_method_set_writer(UI_METHOD *method,

        int (*writer) (UI *ui, UI_STRING *uis));
int UI_method_set_flusher(UI_METHOD *method, int (*flusher) (UI *ui));
int UI_method_set_reader(UI_METHOD *method,
                 int (*reader) (UI *ui, UI_STRING *uis));
int UI_method_set_closer(UI_METHOD *method, int (*closer) (UI *ui));
int UI_method_set_data_duplicator(UI_METHOD *method,
                          void *(*duplicator) (UI *ui, void *ui_data),
                          void (*destructor)(UI *ui, void *ui_data));
int UI_method_set_prompt_constructor(UI_METHOD *method,
                            char *(*prompt_constructor) (UI *ui,
                                                         const char
                                                         *phrase_desc,
                                                         const char
                                                         *object_name));
int UI_method_set_ex_data(UI_METHOD *method,
 int idx, void *data);
int (*UI_method_get_opener(const UI_METHOD *method)) (UI *);
int (*UI_method_get_writer(const UI_METHOD *method)) (UI *, UI_STRING *);
int (*UI_method_get_flusher(const UI_METHOD *method)) (UI *);
int (*UI_method_get_reader(const UI_METHOD *method)) (UI *, UI_STRING *);
int (*UI_method_get_closer(const UI_METHOD *method)) (UI *);
char *(*UI_method_get_prompt_constructor(const UI_METHOD *method))
  (UI *, const char *, const char *);
void *(*UI_method_get_data_duplicator(const UI_METHOD *method)) (UI *, void *);
void (*UI_method_get_data_destructor(const UI_METHOD *method)) (UI *, void *);
const void *UI_method_get_ex_data(const UI_METHOD *method, int idx);

/*
* The following functions are helpers for method writers to access relevant
* data from a UI_STRING.
```

```
*/

/* Return type of the UI_STRING */
enum UI_string_types UI_get_string_type(UI_STRING *uis);
/* Return input flags of the UI_STRING */
int UI_get_input_flags(UI_STRING *uis);
/* Return the actual string
 to output (the prompt, info or error) */
const char *UI_get0_output_string(UI_STRING *uis);
/*
* Return the optional action string to output (the boolean prompt
* instruction)
*/
const char *UI_get0_action_string(UI_STRING *uis);
/* Return the result of a prompt */
const char *UI_get0_result_string(UI_STRING *uis);
int UI_get_result_string_length(UI_STRING *uis);
/*
* Return the string to test the result against.  Only useful with verifies.
*/
const char *UI_get0_test_string(UI_STRING *uis);
/* Return the required minimum size of the result */
int UI_get_result_minsize(UI_STRING *uis);
/* Return the required maximum size of the result */
int UI_get_result_maxsize(UI_STRING *uis);
/* Set the result of a UI_STRING. */
int UI_set_result(UI *ui, UI_STRING *uis, const char *result);
int UI_set_result_ex(UI *ui, UI_STRING *uis, const char *result, int len);

/* A couple of popular utility functions */
int UI_UTIL_read_pw_string(char *buf, int length, const char *prompt,

                           int verify);
int UI_UTIL_read_pw(char *buf, char *buff, int size, const char *prompt,
                    int verify);
UI_METHOD *UI_UTIL_wrap_read_pem_callback(pem_password_cb *cb, int rwflag);



# ifdef  __cplusplus
}
# endif
#endif
#ifndef SRC_PERMISSION_WORKER_PERMISSION_H_
#define SRC_PERMISSION_WORKER_PERMISSION_H_

#if defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS

#include <vector>
```

```
#include "permission/permission_base.h"

namespace node {

namespace permission {

class WorkerPermission final : public PermissionBase {
public:
 void Apply(Environment* env,
            const std::vector<std::string>& allow,
            PermissionScope scope) override;
 bool is_granted(Environment* env,
                 PermissionScope perm,
                 const std::string_view& param = "") const override;

private:
 bool deny_all_;
};

}  // namespace permission

}  // namespace node

#endif  // defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS
#endif  // SRC_PERMISSION_WORKER_PERMISSION_H_
#ifndef SRC_PERMISSION_CHILD_PROCESS_PERMISSION_H_
#define SRC_PERMISSION_CHILD_PROCESS_PERMISSION_H_

#if defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS

#include <vector>
#include "permission/permission_base.h"

namespace node {

namespace permission {

class ChildProcessPermission final : public PermissionBase {
public:
 void Apply(Environment* env,
            const std::vector<std::string>& allow,
            PermissionScope scope) override;
 bool is_granted(Environment* env,
                 PermissionScope perm,
                 const std::string_view& param = "") const override;

private:
 bool deny_all_;
```

```
};

}  // namespace permission

}  // namespace node

#endif  // defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS
#endif  // SRC_PERMISSION_CHILD_PROCESS_PERMISSION_H_
```

MIT License

Copyright (C) 2012-2020 by various contributors (see AUTHORS)

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
 FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.
MIT License

Copyright (c) 2024 npm

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER

LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Copyright (c) 2009, 2010, 2013-2016 by the Brotli Authors.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF
OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

The ISC License

Copyright (c) 2017-2023 npm, Inc., Isaac Z. Schlueter, and Contributors

Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Copyright (c) 2010 Jonathan Hartley
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice,
 this list of conditions and the following disclaimer in the documentation
 and/or other materials provided with the distribution.

* Neither the name of the copyright holders, nor those of its contributors
 may be used to endorse or promote products derived from this software without
 specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
 HOLDER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER
CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Minizlib was created by Isaac Z. Schlueter.
It is a derivative work of the Node.js project.

"""
Copyright (c) 2017-2023 Isaac Z. Schlueter and Contributors
Copyright (c) 2017-2023 Node.js contributors. All rights reserved.
Copyright (c) 2017-2023 Joyent, Inc. and other Node contributors. All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
 OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""
/*
* Copyright 1995-2022 The OpenSSL Project Authors. All Rights Reserved.

```
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_ERR_H
# define OPENSSL_ERR_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_ERR_H
# endif

# include <openssl/e_os2.h>

# ifndef OPENSSL_NO_STDIO
#  include <stdio.h>
#  include <stdlib.h>
# endif

# include <openssl/types.h>
# include <openssl/bio.h>
# include <openssl/lhash.h>
# include <openssl/cryptoerr_legacy.h>

#ifdef  __cplusplus
extern "C" {
#endif

# ifndef OPENSSL_NO_DEPRECATED_3_0
#  ifndef OPENSSL_NO_FILENAMES
#   define ERR_PUT_error(l,f,r,fn,ln)      ERR_put_error(l,f,r,fn,ln)
#  else
#   define ERR_PUT_error(l,f,r,fn,ln)      ERR_put_error(l,f,r,NULL,0)
#  endif
# endif

# include
 <limits.h>
# include <errno.h>

# define ERR_TXT_MALLOCED        0x01
# define ERR_TXT_STRING          0x02
```

```
# if !defined(OPENSSL_NO_DEPRECATED_3_0) || defined(OSSL_FORCE_ERR_STATE)
#  define ERR_FLAG_MARK          0x01
#  define ERR_FLAG_CLEAR         0x02

#  define ERR_NUM_ERRORS  16
struct err_state_st {
  int err_flags[ERR_NUM_ERRORS];
  int err_marks[ERR_NUM_ERRORS];
  unsigned long err_buffer[ERR_NUM_ERRORS];
  char *err_data[ERR_NUM_ERRORS];
  size_t err_data_size[ERR_NUM_ERRORS];
  int err_data_flags[ERR_NUM_ERRORS];
  char *err_file[ERR_NUM_ERRORS];
  int err_line[ERR_NUM_ERRORS];
  char *err_func[ERR_NUM_ERRORS];
  int top, bottom;
};
# endif

/* library */
# define ERR_LIB_NONE           1
# define ERR_LIB_SYS            2
# define ERR_LIB_BN             3
# define ERR_LIB_RSA            4
# define ERR_LIB_DH             5
# define ERR_LIB_EVP            6
# define ERR_LIB_BUF            7
# define ERR_LIB_OBJ            8
# define ERR_LIB_PEM
           9
# define ERR_LIB_DSA            10
# define ERR_LIB_X509           11
/* #define ERR_LIB_METH         12 */
# define ERR_LIB_ASN1           13
# define ERR_LIB_CONF           14
# define ERR_LIB_CRYPTO         15
# define ERR_LIB_EC             16
# define ERR_LIB_SSL            20
/* #define ERR_LIB_SSL23        21 */
/* #define ERR_LIB_SSL2         22 */
/* #define ERR_LIB_SSL3         23 */
/* #define ERR_LIB_RSAREF       30 */
/* #define ERR_LIB_PROXY        31 */
# define ERR_LIB_BIO            32
# define ERR_LIB_PKCS7          33
# define ERR_LIB_X509V3         34
# define ERR_LIB_PKCS12         35
```

```
# define ERR_LIB_RAND          36
# define ERR_LIB_DSO           37
# define ERR_LIB_ENGINE        38
# define ERR_LIB_OCSP          39
# define ERR_LIB_UI            40
# define ERR_LIB_COMP          41
# define ERR_LIB_ECDSA         42
# define ERR_LIB_ECDH          43
# define ERR_LIB_OSSL_STORE    44
# define ERR_LIB_FIPS
   45
# define ERR_LIB_CMS           46
# define ERR_LIB_TS            47
# define ERR_LIB_HMAC          48
/* # define ERR_LIB_JPAKE      49 */
# define ERR_LIB_CT            50
# define ERR_LIB_ASYNC         51
# define ERR_LIB_KDF           52
# define ERR_LIB_SM2           53
# define ERR_LIB_ESS           54
# define ERR_LIB_PROP          55
# define ERR_LIB_CRMF          56
# define ERR_LIB_PROV          57
# define ERR_LIB_CMP           58
# define ERR_LIB_OSSL_ENCODER  59
# define ERR_LIB_OSSL_DECODER  60
# define ERR_LIB_HTTP          61

# define ERR_LIB_USER          128

# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define ASN1err(f, r) ERR_raise_data(ERR_LIB_ASN1, (r), NULL)
#  define ASYNCerr(f, r) ERR_raise_data(ERR_LIB_ASYNC, (r), NULL)
#  define BIOerr(f, r) ERR_raise_data(ERR_LIB_BIO, (r), NULL)
#  define BNerr(f, r)  ERR_raise_data(ERR_LIB_BN, (r), NULL)
#  define BUFerr(f, r) ERR_raise_data(ERR_LIB_BUF, (r), NULL)
#  define CMPerr(f, r) ERR_raise_data(ERR_LIB_CMP,
 (r), NULL)
#  define CMSerr(f, r) ERR_raise_data(ERR_LIB_CMS, (r), NULL)
#  define COMPerr(f, r) ERR_raise_data(ERR_LIB_COMP, (r), NULL)
#  define CONFerr(f, r) ERR_raise_data(ERR_LIB_CONF, (r), NULL)
#  define CRMFerr(f, r) ERR_raise_data(ERR_LIB_CRMF, (r), NULL)
#  define CRYPTOerr(f, r) ERR_raise_data(ERR_LIB_CRYPTO, (r), NULL)
#  define CTerr(f, r) ERR_raise_data(ERR_LIB_CT, (r), NULL)
#  define DHerr(f, r)  ERR_raise_data(ERR_LIB_DH, (r), NULL)
#  define DSAerr(f, r) ERR_raise_data(ERR_LIB_DSA, (r), NULL)
#  define DSOerr(f, r) ERR_raise_data(ERR_LIB_DSO, (r), NULL)
#  define ECDHerr(f, r) ERR_raise_data(ERR_LIB_ECDH, (r), NULL)
```

```
#  define ECDSAerr(f, r) ERR_raise_data(ERR_LIB_ECDSA, (r), NULL)
#  define ECerr(f, r)  ERR_raise_data(ERR_LIB_EC, (r), NULL)
#  define ENGINEerr(f, r) ERR_raise_data(ERR_LIB_ENGINE, (r), NULL)
#  define ESSerr(f, r) ERR_raise_data(ERR_LIB_ESS, (r), NULL)
#  define EVPerr(f, r) ERR_raise_data(ERR_LIB_EVP, (r), NULL)
#  define FIPSerr(f,
 r) ERR_raise_data(ERR_LIB_FIPS, (r), NULL)
#  define HMACerr(f, r) ERR_raise_data(ERR_LIB_HMAC, (r), NULL)
#  define HTTPerr(f, r) ERR_raise_data(ERR_LIB_HTTP, (r), NULL)
#  define KDFerr(f, r) ERR_raise_data(ERR_LIB_KDF, (r), NULL)
#  define OBJerr(f, r) ERR_raise_data(ERR_LIB_OBJ, (r), NULL)
#  define OCSPerr(f, r) ERR_raise_data(ERR_LIB_OCSP, (r), NULL)
#  define OSSL_STOREerr(f, r) ERR_raise_data(ERR_LIB_OSSL_STORE, (r), NULL)
#  define PEMerr(f, r) ERR_raise_data(ERR_LIB_PEM, (r), NULL)
#  define PKCS12err(f, r) ERR_raise_data(ERR_LIB_PKCS12, (r), NULL)
#  define PKCS7err(f, r) ERR_raise_data(ERR_LIB_PKCS7, (r), NULL)
#  define PROPerr(f, r) ERR_raise_data(ERR_LIB_PROP, (r), NULL)
#  define PROVerr(f, r) ERR_raise_data(ERR_LIB_PROV, (r), NULL)
#  define RANDerr(f, r) ERR_raise_data(ERR_LIB_RAND, (r), NULL)
#  define RSAerr(f, r) ERR_raise_data(ERR_LIB_RSA, (r), NULL)
#  define KDFerr(f, r) ERR_raise_data(ERR_LIB_KDF, (r), NULL)
#  define SM2err(f, r) ERR_raise_data(ERR_LIB_SM2,
 (r), NULL)
#  define SSLerr(f, r) ERR_raise_data(ERR_LIB_SSL, (r), NULL)
#  define SYSerr(f, r) ERR_raise_data(ERR_LIB_SYS, (r), NULL)
#  define TSerr(f, r) ERR_raise_data(ERR_LIB_TS, (r), NULL)
#  define UIerr(f, r) ERR_raise_data(ERR_LIB_UI, (r), NULL)
#  define X509V3err(f, r) ERR_raise_data(ERR_LIB_X509V3, (r), NULL)
#  define X509err(f, r) ERR_raise_data(ERR_LIB_X509, (r), NULL)
# endif

/*-
* The error code packs differently depending on if it records a system
* error or an OpenSSL error.
*
* A system error packs like this (we follow POSIX and only allow positive
* numbers that fit in an |int|):
*
* +-+-------------------------------------------------------------+
* |1|                  system error number                        |
* +-+-------------------------------------------------------------+
*
* An OpenSSL error packs like this:
*
* <---------------------------- 32 bits -------------------------->
*    <--- 8 bits ---><------------------ 23 bits ----------------->
 * +-+---------------+---------------------------------------------+
* |0|    library    |                  reason                     |
```

```
* +-+---------------+-------------------------------------------------+
*
* A few of the reason bits are reserved as flags with special meaning:
*
*                  <5 bits-<>--------- 19 bits ----------------->
*                 +-------+-+-----------------------------------+
*                 | rflags| |         reason                    |
*                 +-------+-+-----------------------------------+
*                         ^
*                         |
*                        ERR_RFLAG_FATAL = ERR_R_FATAL
*
* The reason flags are part of the overall reason code for practical
* reasons, as they provide an easy way to place different types of
* reason codes in different numeric ranges.
*
* The currently known reason flags are:
*
* ERR_RFLAG_FATAL      Flags that the reason code is considered fatal.
*
                      For backward compatibility reasons, this flag
*                       is also the code for ERR_R_FATAL (that reason
*                       code served the dual purpose of flag and reason
*                       code in one in pre-3.0 OpenSSL).
* ERR_RFLAG_COMMON     Flags that the reason code is common to all
*                       libraries.  All ERR_R_ macros must use this flag,
*                       and no other _R_ macro is allowed to use it.
*/

/* Macros to help decode recorded system errors */
# define ERR_SYSTEM_FLAG              ((unsigned int)INT_MAX + 1)
# define ERR_SYSTEM_MASK              ((unsigned int)INT_MAX)

/*
* Macros to help decode recorded OpenSSL errors
* As expressed above, RFLAGS and REASON overlap by one bit to allow
* ERR_R_FATAL to use ERR_RFLAG_FATAL as its reason code.
*/
# define ERR_LIB_OFFSET               23L
# define ERR_LIB_MASK                 0xFF
# define ERR_RFLAGS_OFFSET            18L
# define ERR_RFLAGS_MASK
            0x1F
# define ERR_REASON_MASK              0X7FFFFF

/*
* Reason flags are defined pre-shifted to easily combine with the reason
* number.
```

```
*/
# define ERR_RFLAG_FATAL               (0x1 << ERR_RFLAGS_OFFSET)
# define ERR_RFLAG_COMMON              (0x2 << ERR_RFLAGS_OFFSET)

# define ERR_SYSTEM_ERROR(errcode)      (((errcode) & ERR_SYSTEM_FLAG) != 0)

static ossl_unused ossl_inline int ERR_GET_LIB(unsigned long errcode)
{
  if (ERR_SYSTEM_ERROR(errcode))
     return ERR_LIB_SYS;
  return (errcode >> ERR_LIB_OFFSET) & ERR_LIB_MASK;
}

static ossl_unused ossl_inline int ERR_GET_RFLAGS(unsigned long errcode)
{
  if (ERR_SYSTEM_ERROR(errcode))
     return 0;
  return errcode & (ERR_RFLAGS_MASK << ERR_RFLAGS_OFFSET);
}

static ossl_unused ossl_inline int ERR_GET_REASON(unsigned long errcode)
{
  if (ERR_SYSTEM_ERROR(errcode))
     return errcode & ERR_SYSTEM_MASK;
  return errcode & ERR_REASON_MASK;
}

static ossl_unused ossl_inline int ERR_FATAL_ERROR(unsigned
 long errcode)
{
  return (ERR_GET_RFLAGS(errcode) & ERR_RFLAG_FATAL) != 0;
}

static ossl_unused ossl_inline int ERR_COMMON_ERROR(unsigned long errcode)
{
  return (ERR_GET_RFLAGS(errcode) & ERR_RFLAG_COMMON) != 0;
}

/*
* ERR_PACK is a helper macro to properly pack OpenSSL error codes and may
* only be used for that purpose.  System errors are packed internally.
* ERR_PACK takes reason flags and reason code combined in |reason|.
* ERR_PACK ignores |func|, that parameter is just legacy from pre-3.0 OpenSSL.
*/
# define ERR_PACK(lib,func,reason)                                  \
  ( (((unsigned long)(lib)    & ERR_LIB_MASK   ) << ERR_LIB_OFFSET) | \
    (((unsigned long)(reason) & ERR_REASON_MASK)) )
```

```
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define SYS_F_FOPEN            0
#  define SYS_F_CONNECT          0
#  define SYS_F_GETSERVBYNAME    0
#  define SYS_F_SOCKET           0
#  define SYS_F_IOCTLSOCKET      0
#  define SYS_F_BIND             0
#
  define SYS_F_LISTEN           0
#  define SYS_F_ACCEPT           0
#  define SYS_F_WSASTARTUP       0
#  define SYS_F_OPENDIR          0
#  define SYS_F_FREAD            0
#  define SYS_F_GETADDRINFO      0
#  define SYS_F_GETNAMEINFO      0
#  define SYS_F_SETSOCKOPT       0
#  define SYS_F_GETSOCKOPT       0
#  define SYS_F_GETSOCKNAME      0
#  define SYS_F_GETHOSTBYNAME    0
#  define SYS_F_FFLUSH           0
#  define SYS_F_OPEN             0
#  define SYS_F_CLOSE            0
#  define SYS_F_IOCTL            0
#  define SYS_F_STAT             0
#  define SYS_F_FCNTL            0
#  define SYS_F_FSTAT            0
#  define SYS_F_SENDFILE         0
# endif

/*
* All ERR_R_ codes must be combined with ERR_RFLAG_COMMON.
*/

/* "we came from here" global reason codes, range 1..255 */
# define ERR_R_SYS_LIB         (ERR_LIB_SYS/* 2 */ | ERR_RFLAG_COMMON)
# define ERR_R_BN_LIB          (ERR_LIB_BN/* 3 */ | ERR_RFLAG_COMMON)
# define ERR_R_RSA_LIB         (ERR_LIB_RSA/*
 4 */ | ERR_RFLAG_COMMON)
# define ERR_R_DH_LIB          (ERR_LIB_DH/* 5 */ | ERR_RFLAG_COMMON)
# define ERR_R_EVP_LIB         (ERR_LIB_EVP/* 6 */ | ERR_RFLAG_COMMON)
# define ERR_R_BUF_LIB         (ERR_LIB_BUF/* 7 */ | ERR_RFLAG_COMMON)
# define ERR_R_OBJ_LIB         (ERR_LIB_OBJ/* 8 */ | ERR_RFLAG_COMMON)
# define ERR_R_PEM_LIB         (ERR_LIB_PEM/* 9 */ | ERR_RFLAG_COMMON)
# define ERR_R_DSA_LIB         (ERR_LIB_DSA/* 10 */ | ERR_RFLAG_COMMON)
# define ERR_R_X509_LIB        (ERR_LIB_X509/* 11 */ | ERR_RFLAG_COMMON)
# define ERR_R_ASN1_LIB        (ERR_LIB_ASN1/* 13 */ | ERR_RFLAG_COMMON)
# define ERR_R_CONF_LIB        (ERR_LIB_CONF/* 14 */ | ERR_RFLAG_COMMON)
# define ERR_R_CRYPTO_LIB      (ERR_LIB_CRYPTO/* 15 */ | ERR_RFLAG_COMMON)
```

```
# define ERR_R_EC_LIB          (ERR_LIB_EC/* 16 */ | ERR_RFLAG_COMMON)
# define ERR_R_SSL_LIB         (ERR_LIB_SSL/* 20 */ | ERR_RFLAG_COMMON)
# define ERR_R_BIO_LIB         (ERR_LIB_BIO/* 32 */ | ERR_RFLAG_COMMON)
# define ERR_R_PKCS7_LIB
      (ERR_LIB_PKCS7/* 33 */ | ERR_RFLAG_COMMON)
# define ERR_R_X509V3_LIB      (ERR_LIB_X509V3/* 34 */ | ERR_RFLAG_COMMON)
# define ERR_R_PKCS12_LIB      (ERR_LIB_PKCS12/* 35 */ | ERR_RFLAG_COMMON)
# define ERR_R_RAND_LIB        (ERR_LIB_RAND/* 36 */ | ERR_RFLAG_COMMON)
# define ERR_R_DSO_LIB         (ERR_LIB_DSO/* 37 */ | ERR_RFLAG_COMMON)
# define ERR_R_ENGINE_LIB      (ERR_LIB_ENGINE/* 38 */ | ERR_RFLAG_COMMON)
# define ERR_R_UI_LIB          (ERR_LIB_UI/* 40 */ | ERR_RFLAG_COMMON)
# define ERR_R_ECDSA_LIB       (ERR_LIB_ECDSA/* 42 */ | ERR_RFLAG_COMMON)
# define ERR_R_OSSL_STORE_LIB  (ERR_LIB_OSSL_STORE/* 44 */ | ERR_RFLAG_COMMON)
# define ERR_R_CMS_LIB         (ERR_LIB_CMS/* 46 */ | ERR_RFLAG_COMMON)
# define ERR_R_TS_LIB          (ERR_LIB_TS/* 47 */ | ERR_RFLAG_COMMON)
# define ERR_R_CT_LIB          (ERR_LIB_CT/* 50 */ | ERR_RFLAG_COMMON)
# define ERR_R_PROV_LIB        (ERR_LIB_PROV/* 57 */ | ERR_RFLAG_COMMON)
# define ERR_R_ESS_LIB         (ERR_LIB_ESS/* 54
 */ | ERR_RFLAG_COMMON)
# define ERR_R_CMP_LIB         (ERR_LIB_CMP/* 58 */ | ERR_RFLAG_COMMON)
# define ERR_R_OSSL_ENCODER_LIB (ERR_LIB_OSSL_ENCODER/* 59 */ | ERR_RFLAG_COMMON)
# define ERR_R_OSSL_DECODER_LIB (ERR_LIB_OSSL_DECODER/* 60 */ | ERR_RFLAG_COMMON)

/* Other common error codes, range 256..2^ERR_RFLAGS_OFFSET-1 */
# define ERR_R_FATAL                    (ERR_RFLAG_FATAL|ERR_RFLAG_COMMON)
# define ERR_R_MALLOC_FAILURE           (256|ERR_R_FATAL)
# define ERR_R_SHOULD_NOT_HAVE_BEEN_CALLED  (257|ERR_R_FATAL)
# define ERR_R_PASSED_NULL_PARAMETER    (258|ERR_R_FATAL)
# define ERR_R_INTERNAL_ERROR           (259|ERR_R_FATAL)
# define ERR_R_DISABLED                 (260|ERR_R_FATAL)
# define ERR_R_INIT_FAIL                (261|ERR_R_FATAL)
# define ERR_R_PASSED_INVALID_ARGUMENT  (262|ERR_RFLAG_COMMON)
# define ERR_R_OPERATION_FAIL           (263|ERR_R_FATAL)
# define ERR_R_INVALID_PROVIDER_FUNCTIONS
  (264|ERR_R_FATAL)
# define ERR_R_INTERRUPTED_OR_CANCELLED (265|ERR_RFLAG_COMMON)
# define ERR_R_NESTED_ASN1_ERROR        (266|ERR_RFLAG_COMMON)
# define ERR_R_MISSING_ASN1_EOS         (267|ERR_RFLAG_COMMON)
# define ERR_R_UNSUPPORTED              (268|ERR_RFLAG_COMMON)
# define ERR_R_FETCH_FAILED             (269|ERR_RFLAG_COMMON)
# define ERR_R_INVALID_PROPERTY_DEFINITION (270|ERR_RFLAG_COMMON)
# define ERR_R_UNABLE_TO_GET_READ_LOCK  (271|ERR_R_FATAL)
# define ERR_R_UNABLE_TO_GET_WRITE_LOCK (272|ERR_R_FATAL)

typedef struct ERR_string_data_st {
  unsigned long error;
  const char *string;
} ERR_STRING_DATA;
```

```
DEFINE_LHASH_OF_INTERNAL(ERR_STRING_DATA);
#define lh_ERR_STRING_DATA_new(hfn, cmp) ((LHASH_OF(ERR_STRING_DATA)
*)OPENSSL_LH_new(ossl_check_ERR_STRING_DATA_lh_hashfunc_type(hfn),
ossl_check_ERR_STRING_DATA_lh_compfunc_type(cmp)))
#define lh_ERR_STRING_DATA_free(lh) OPENSSL_LH_free(ossl_check_ERR_STRING_DATA_lh_type(lh))
#define
 lh_ERR_STRING_DATA_flush(lh) OPENSSL_LH_flush(ossl_check_ERR_STRING_DATA_lh_type(lh))
#define lh_ERR_STRING_DATA_insert(lh, ptr) ((ERR_STRING_DATA
*)OPENSSL_LH_insert(ossl_check_ERR_STRING_DATA_lh_type(lh),
ossl_check_ERR_STRING_DATA_lh_plain_type(ptr)))
#define lh_ERR_STRING_DATA_delete(lh, ptr) ((ERR_STRING_DATA
*)OPENSSL_LH_delete(ossl_check_ERR_STRING_DATA_lh_type(lh),
ossl_check_const_ERR_STRING_DATA_lh_plain_type(ptr)))
#define lh_ERR_STRING_DATA_retrieve(lh, ptr) ((ERR_STRING_DATA
*)OPENSSL_LH_retrieve(ossl_check_ERR_STRING_DATA_lh_type(lh),
ossl_check_const_ERR_STRING_DATA_lh_plain_type(ptr)))
#define lh_ERR_STRING_DATA_error(lh) OPENSSL_LH_error(ossl_check_ERR_STRING_DATA_lh_type(lh))
#define lh_ERR_STRING_DATA_num_items(lh)
OPENSSL_LH_num_items(ossl_check_ERR_STRING_DATA_lh_type(lh))
#define lh_ERR_STRING_DATA_node_stats_bio(lh, out)
OPENSSL_LH_node_stats_bio(ossl_check_const_ERR_STRING_DATA_lh_type(lh), out)
#define lh_ERR_STRING_DATA_node_usage_stats_bio(lh,
 out) OPENSSL_LH_node_usage_stats_bio(ossl_check_const_ERR_STRING_DATA_lh_type(lh), out)
#define lh_ERR_STRING_DATA_stats_bio(lh, out)
OPENSSL_LH_stats_bio(ossl_check_const_ERR_STRING_DATA_lh_type(lh), out)
#define lh_ERR_STRING_DATA_get_down_load(lh)
OPENSSL_LH_get_down_load(ossl_check_ERR_STRING_DATA_lh_type(lh))
#define lh_ERR_STRING_DATA_set_down_load(lh, dl)
OPENSSL_LH_set_down_load(ossl_check_ERR_STRING_DATA_lh_type(lh), dl)
#define lh_ERR_STRING_DATA_doall(lh, dfn)
OPENSSL_LH_doall(ossl_check_ERR_STRING_DATA_lh_type(lh),
ossl_check_ERR_STRING_DATA_lh_doallfunc_type(dfn))


/* 12 lines and some on an 80 column terminal */
#define ERR_MAX_DATA_SIZE       1024

/* Building blocks */
void ERR_new(void);
void ERR_set_debug(const char *file, int line, const char *func);
void ERR_set_error(int lib, int reason, const char *fmt, ...);
void ERR_vset_error(int lib, int reason, const char *fmt, va_list args);

/* Main error raising functions */
# define ERR_raise(lib, reason) ERR_raise_data((lib),(reason),NULL)
#
```

```
 define ERR_raise_data                           \
  (ERR_new(),                                    \
   ERR_set_debug(OPENSSL_FILE,OPENSSL_LINE,OPENSSL_FUNC),    \
   ERR_set_error)

# ifndef OPENSSL_NO_DEPRECATED_3_0
/* Backward compatibility */
#  define ERR_put_error(lib, func, reason, file, line)        \
  (ERR_new(),                                    \
   ERR_set_debug((file), (line), OPENSSL_FUNC),              \
   ERR_set_error((lib), (reason), NULL))
# endif

void ERR_set_error_data(char *data, int flags);

unsigned long ERR_get_error(void);
unsigned long ERR_get_error_all(const char **file, int *line,
                        const char **func,
                        const char **data, int *flags);
# ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0
unsigned long ERR_get_error_line(const char **file, int *line);
OSSL_DEPRECATEDIN_3_0
unsigned long ERR_get_error_line_data(const
 char **file, int *line,
                              const char **data, int *flags);
#endif
unsigned long ERR_peek_error(void);
unsigned long ERR_peek_error_line(const char **file, int *line);
unsigned long ERR_peek_error_func(const char **func);
unsigned long ERR_peek_error_data(const char **data, int *flags);
unsigned long ERR_peek_error_all(const char **file, int *line,
                         const char **func,
                         const char **data, int *flags);
# ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0
unsigned long ERR_peek_error_line_data(const char **file, int *line,
                               const char **data, int *flags);
# endif
unsigned long ERR_peek_last_error(void);
unsigned long ERR_peek_last_error_line(const char **file, int *line);
unsigned long ERR_peek_last_error_func(const char **func);
unsigned long ERR_peek_last_error_data(const char **data, int *flags);
unsigned long ERR_peek_last_error_all(const
 char **file, int *line,
                              const char **func,
                              const char **data, int *flags);
# ifndef OPENSSL_NO_DEPRECATED_3_0
```

```
OSSL_DEPRECATEDIN_3_0
unsigned long ERR_peek_last_error_line_data(const char **file, int *line,
                                            const char **data, int *flags);
# endif

void ERR_clear_error(void);

char *ERR_error_string(unsigned long e, char *buf);
void ERR_error_string_n(unsigned long e, char *buf, size_t len);
const char *ERR_lib_error_string(unsigned long e);
# ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 const char *ERR_func_error_string(unsigned long e);
# endif
const char *ERR_reason_error_string(unsigned long e);

void ERR_print_errors_cb(int (*cb) (const char *str, size_t len, void *u),
                         void *u);
# ifndef OPENSSL_NO_STDIO
void ERR_print_errors_fp(FILE *fp);
# endif
void ERR_print_errors(BIO *bp);

void ERR_add_error_data(int num, ...);
void ERR_add_error_vdata(int
 num, va_list args);
void ERR_add_error_txt(const char *sepr, const char *txt);
void ERR_add_error_mem_bio(const char *sep, BIO *bio);

int ERR_load_strings(int lib, ERR_STRING_DATA *str);
int ERR_load_strings_const(const ERR_STRING_DATA *str);
int ERR_unload_strings(int lib, ERR_STRING_DATA *str);

#ifndef OPENSSL_NO_DEPRECATED_1_1_0
# define ERR_load_crypto_strings() \
  OPENSSL_init_crypto(OPENSSL_INIT_LOAD_CRYPTO_STRINGS, NULL)
# define ERR_free_strings() while(0) continue
#endif
#ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 void ERR_remove_thread_state(void *);
#endif
#ifndef OPENSSL_NO_DEPRECATED_1_0_0
OSSL_DEPRECATEDIN_1_0_0 void ERR_remove_state(unsigned long pid);
#endif
#ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 ERR_STATE *ERR_get_state(void);
#endif

int ERR_get_next_error_library(void);
```

int ERR_set_mark(void);
int ERR_pop_to_mark(void);
int ERR_clear_last_mark(void);

#ifdef __cplusplus
}
#endif

#endif
The MIT License (MIT)

Copyright (c) 2017 Facebook Inc.
Copyright (c) 2017 Georgia Institute of Technology
Copyright 2019 Google LLC

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
 WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition,

"control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and

subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding

those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise,

unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

==
This product also include the following software:
==

QRCode for JavaScript

Copyright (c) 2009 Kazuhiko Arase

URL: http://www.d-project.com/

Licensed under the MIT license:
  http://www.opensource.org/licenses/mit-license.php

The word "QR Code" is registered trademark of
DENSO WAVE INCORPORATED
  http://www.denso-wave.com/qrcode/faqpatent-e.html

Located in ./vendor/QRCode
- project has been modified to work in Node and some refactoring was done for code cleanup
This software is licensed under the MIT License.

Copyright Fedor Indutny, 2018.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to permit
persons to whom the Software is furnished to do so, subject to the
following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN
NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE,
 ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE
USE OR OTHER DEALINGS IN THE SOFTWARE.
/*
* Copyright 1995-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy

```
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



/*
* Header for dynamic hash table routines Author - Eric Young
*/

#ifndef OPENSSL_LHASH_H
# define OPENSSL_LHASH_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_LHASH_H
# endif

# include <openssl/e_os2.h>
# include <openssl/bio.h>

#ifdef  __cplusplus
extern "C" {
#endif

typedef struct lhash_node_st OPENSSL_LH_NODE;
typedef int (*OPENSSL_LH_COMPFUNC) (const void *, const void *);
typedef unsigned long (*OPENSSL_LH_HASHFUNC) (const void *);
typedef void (*OPENSSL_LH_DOALL_FUNC) (void *);
typedef void (*OPENSSL_LH_DOALL_FUNCARG) (void *, void *);
typedef struct lhash_st OPENSSL_LHASH;

/*
* Macros for
 declaring and implementing type-safe wrappers for LHASH
* callbacks. This way, callbacks can be provided to LHASH structures without
* function pointer casting and the macro-defined callbacks provide
* per-variable casting before deferring to the underlying type-specific
* callbacks. NB: It is possible to place a "static" in front of both the
* DECLARE and IMPLEMENT macros if the functions are strictly internal.
*/

/* First: "hash" functions */
# define DECLARE_LHASH_HASH_FN(name, o_type) \
      unsigned long name##_LHASH_HASH(const void *);
# define IMPLEMENT_LHASH_HASH_FN(name, o_type) \
      unsigned long name##_LHASH_HASH(const void *arg) { \
```

```
            const o_type *a = arg; \
            return name##_hash(a); }
# define LHASH_HASH_FN(name) name##_LHASH_HASH

/* Second: "compare" functions */
# define DECLARE_LHASH_COMP_FN(name, o_type) \
      int name##_LHASH_COMP(const void *, const void *);
# define IMPLEMENT_LHASH_COMP_FN(name, o_type) \
      int
 name##_LHASH_COMP(const void *arg1, const void *arg2) { \
            const o_type *a = arg1;             \
            const o_type *b = arg2; \
            return name##_cmp(a,b); }
# define LHASH_COMP_FN(name) name##_LHASH_COMP

/* Fourth: "doall_arg" functions */
# define DECLARE_LHASH_DOALL_ARG_FN(name, o_type, a_type) \
      void name##_LHASH_DOALL_ARG(void *, void *);
# define IMPLEMENT_LHASH_DOALL_ARG_FN(name, o_type, a_type) \
      void name##_LHASH_DOALL_ARG(void *arg1, void *arg2) { \
            o_type *a = arg1; \
            a_type *b = arg2; \
            name##_doall_arg(a, b); }
# define LHASH_DOALL_ARG_FN(name) name##_LHASH_DOALL_ARG


# define LH_LOAD_MULT    256

int OPENSSL_LH_error(OPENSSL_LHASH *lh);
OPENSSL_LHASH *OPENSSL_LH_new(OPENSSL_LH_HASHFUNC h, OPENSSL_LH_COMPFUNC c);
void OPENSSL_LH_free(OPENSSL_LHASH *lh);
void OPENSSL_LH_flush(OPENSSL_LHASH *lh);
void *OPENSSL_LH_insert(OPENSSL_LHASH *lh, void *data);
void *OPENSSL_LH_delete(OPENSSL_LHASH
 *lh, const void *data);
void *OPENSSL_LH_retrieve(OPENSSL_LHASH *lh, const void *data);
void OPENSSL_LH_doall(OPENSSL_LHASH *lh, OPENSSL_LH_DOALL_FUNC func);
void OPENSSL_LH_doall_arg(OPENSSL_LHASH *lh, OPENSSL_LH_DOALL_FUNCARG func, void *arg);
unsigned long OPENSSL_LH_strhash(const char *c);
unsigned long OPENSSL_LH_num_items(const OPENSSL_LHASH *lh);
unsigned long OPENSSL_LH_get_down_load(const OPENSSL_LHASH *lh);
void OPENSSL_LH_set_down_load(OPENSSL_LHASH *lh, unsigned long down_load);

# ifndef OPENSSL_NO_STDIO
void OPENSSL_LH_stats(const OPENSSL_LHASH *lh, FILE *fp);
void OPENSSL_LH_node_stats(const OPENSSL_LHASH *lh, FILE *fp);
void OPENSSL_LH_node_usage_stats(const OPENSSL_LHASH *lh, FILE *fp);
# endif
```

```
void OPENSSL_LH_stats_bio(const OPENSSL_LHASH *lh, BIO *out);
void OPENSSL_LH_node_stats_bio(const OPENSSL_LHASH *lh, BIO *out);
void OPENSSL_LH_node_usage_stats_bio(const OPENSSL_LHASH *lh, BIO *out);

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define _LHASH OPENSSL_LHASH
#
 define LHASH_NODE OPENSSL_LH_NODE
#  define lh_error OPENSSL_LH_error
#  define lh_new OPENSSL_LH_new
#  define lh_free OPENSSL_LH_free
#  define lh_insert OPENSSL_LH_insert
#  define lh_delete OPENSSL_LH_delete
#  define lh_retrieve OPENSSL_LH_retrieve
#  define lh_doall OPENSSL_LH_doall
#  define lh_doall_arg OPENSSL_LH_doall_arg
#  define lh_strhash OPENSSL_LH_strhash
#  define lh_num_items OPENSSL_LH_num_items
#  ifndef OPENSSL_NO_STDIO
#   define lh_stats OPENSSL_LH_stats
#   define lh_node_stats OPENSSL_LH_node_stats
#   define lh_node_usage_stats OPENSSL_LH_node_usage_stats
#  endif
#  define lh_stats_bio OPENSSL_LH_stats_bio
#  define lh_node_stats_bio OPENSSL_LH_node_stats_bio
#  define lh_node_usage_stats_bio OPENSSL_LH_node_usage_stats_bio
# endif

/* Type checking... */

# define LHASH_OF(type) struct lhash_st_##type

/* Helper macro for internal use */
# define DEFINE_LHASH_OF_INTERNAL(type) \
  LHASH_OF(type) { union lh_##type##_dummy { void* d1; unsigned long
 d2; int d3; } dummy; }; \
  typedef int (*lh_##type##_compfunc)(const type *a, const type *b); \
  typedef unsigned long (*lh_##type##_hashfunc)(const type *a); \
  typedef void (*lh_##type##_doallfunc)(type *a); \
  static ossl_unused ossl_inline type *ossl_check_##type##_lh_plain_type(type *ptr) \
  { \
      return ptr; \
  } \
  static ossl_unused ossl_inline const type *ossl_check_const_##type##_lh_plain_type(const type *ptr) \
  { \
      return ptr; \
  } \
  static ossl_unused ossl_inline const OPENSSL_LHASH *ossl_check_const_##type##_lh_type(const
```

```
LHASH_OF(type) *lh) \
  { \
     return (const OPENSSL_LHASH *)lh; \
  } \
  static ossl_unused ossl_inline OPENSSL_LHASH *ossl_check_##type##_lh_type(LHASH_OF(type) *lh) \
  { \
     return (OPENSSL_LHASH *)lh; \
  } \
  static ossl_unused ossl_inline OPENSSL_LH_COMPFUNC
ossl_check_##type##_lh_compfunc_type(lh_##type##_compfunc cmp) \
  { \
     return (OPENSSL_LH_COMPFUNC)cmp; \

  } \
  static ossl_unused ossl_inline OPENSSL_LH_HASHFUNC
ossl_check_##type##_lh_hashfunc_type(lh_##type##_hashfunc hfn) \
  { \
     return (OPENSSL_LH_HASHFUNC)hfn; \
  } \
  static ossl_unused ossl_inline OPENSSL_LH_DOALL_FUNC
ossl_check_##type##_lh_doallfunc_type(lh_##type##_doallfunc dfn) \
  { \
     return (OPENSSL_LH_DOALL_FUNC)dfn; \
  } \
  LHASH_OF(type)

# define DEFINE_LHASH_OF(type) \
  LHASH_OF(type) { union lh_##type##_dummy { void* d1; unsigned long d2; int d3; } dummy; }; \
  static ossl_unused ossl_inline LHASH_OF(type) *lh_##type##_new(unsigned long (*hfn)(const type *), \
                                                 int (*cfn)(const type *, const type *)) \
  { \
     return (LHASH_OF(type) *) \
        OPENSSL_LH_new((OPENSSL_LH_HASHFUNC)hfn, (OPENSSL_LH_COMPFUNC)cfn); \
  } \
  static ossl_unused ossl_inline void lh_##type##_free(LHASH_OF(type) *lh) \
  { \
     OPENSSL_LH_free((OPENSSL_LHASH *)lh);
 \
  } \
  static ossl_unused ossl_inline void lh_##type##_flush(LHASH_OF(type) *lh) \
  { \
     OPENSSL_LH_flush((OPENSSL_LHASH *)lh); \
  } \
  static ossl_unused ossl_inline type *lh_##type##_insert(LHASH_OF(type) *lh, type *d) \
  { \
     return (type *)OPENSSL_LH_insert((OPENSSL_LHASH *)lh, d); \
  } \
  static ossl_unused ossl_inline type *lh_##type##_delete(LHASH_OF(type) *lh, const type *d) \
```

```
 { \
    return (type *)OPENSSL_LH_delete((OPENSSL_LHASH *)lh, d); \
 } \
 static ossl_unused ossl_inline type *lh_##type##_retrieve(LHASH_OF(type) *lh, const type *d) \
 { \
    return (type *)OPENSSL_LH_retrieve((OPENSSL_LHASH *)lh, d); \
 } \
 static ossl_unused ossl_inline int lh_##type##_error(LHASH_OF(type) *lh) \
 { \
    return OPENSSL_LH_error((OPENSSL_LHASH *)lh); \
 } \
 static ossl_unused ossl_inline unsigned long lh_##type##_num_items(LHASH_OF(type) *lh) \
 { \
    return OPENSSL_LH_num_items((OPENSSL_LHASH
*)lh); \
 } \
 static ossl_unused ossl_inline void lh_##type##_node_stats_bio(const LHASH_OF(type) *lh, BIO *out) \
 { \
    OPENSSL_LH_node_stats_bio((const OPENSSL_LHASH *)lh, out); \
 } \
 static ossl_unused ossl_inline void lh_##type##_node_usage_stats_bio(const LHASH_OF(type) *lh, BIO *out) \
 { \
    OPENSSL_LH_node_usage_stats_bio((const OPENSSL_LHASH *)lh, out); \
 } \
 static ossl_unused ossl_inline void lh_##type##_stats_bio(const LHASH_OF(type) *lh, BIO *out) \
 { \
    OPENSSL_LH_stats_bio((const OPENSSL_LHASH *)lh, out); \
 } \
 static ossl_unused ossl_inline unsigned long lh_##type##_get_down_load(LHASH_OF(type) *lh) \
 { \
    return OPENSSL_LH_get_down_load((OPENSSL_LHASH *)lh); \
 } \
 static ossl_unused ossl_inline void lh_##type##_set_down_load(LHASH_OF(type) *lh, unsigned long dl) \
 { \
    OPENSSL_LH_set_down_load((OPENSSL_LHASH *)lh, dl); \
 } \
 static ossl_unused ossl_inline void lh_##type##_doall(LHASH_OF(type)
*lh, \
                                       void (*doall)(type *)) \
 { \
    OPENSSL_LH_doall((OPENSSL_LHASH *)lh, (OPENSSL_LH_DOALL_FUNC)doall); \
 } \
 static ossl_unused ossl_inline void lh_##type##_doall_arg(LHASH_OF(type) *lh, \
                                           void (*doallarg)(type *, void *), \
                                           void *arg) \
 { \
    OPENSSL_LH_doall_arg((OPENSSL_LHASH *)lh, \
                         (OPENSSL_LH_DOALL_FUNCARG)doallarg, arg); \
```

```
  } \
  LHASH_OF(type)

#define IMPLEMENT_LHASH_DOALL_ARG_CONST(type, argtype) \
  int_implement_lhash_doall(type, argtype, const type)

#define IMPLEMENT_LHASH_DOALL_ARG(type, argtype) \
  int_implement_lhash_doall(type, argtype, type)

#define int_implement_lhash_doall(type, argtype, cbargtype) \
  static ossl_unused ossl_inline void \
    lh_##type##_doall_##argtype(LHASH_OF(type) *lh,
 \
                        void (*fn)(cbargtype *, argtype *), \
                        argtype *arg) \
  { \
    OPENSSL_LH_doall_arg((OPENSSL_LHASH *)lh, (OPENSSL_LH_DOALL_FUNCARG)fn, (void *)arg); \
  } \
  LHASH_OF(type)

DEFINE_LHASH_OF_INTERNAL(OPENSSL_STRING);
#define lh_OPENSSL_STRING_new(hfn, cmp) ((LHASH_OF(OPENSSL_STRING)
*)OPENSSL_LH_new(ossl_check_OPENSSL_STRING_lh_hashfunc_type(hfn),
ossl_check_OPENSSL_STRING_lh_compfunc_type(cmp)))
#define lh_OPENSSL_STRING_free(lh) OPENSSL_LH_free(ossl_check_OPENSSL_STRING_lh_type(lh))
#define lh_OPENSSL_STRING_flush(lh) OPENSSL_LH_flush(ossl_check_OPENSSL_STRING_lh_type(lh))
#define lh_OPENSSL_STRING_insert(lh, ptr) ((OPENSSL_STRING
*)OPENSSL_LH_insert(ossl_check_OPENSSL_STRING_lh_type(lh),
ossl_check_OPENSSL_STRING_lh_plain_type(ptr)))
#define lh_OPENSSL_STRING_delete(lh, ptr) ((OPENSSL_STRING
*)OPENSSL_LH_delete(ossl_check_OPENSSL_STRING_lh_type(lh),
ossl_check_const_OPENSSL_STRING_lh_plain_type(ptr)))
#define
 lh_OPENSSL_STRING_retrieve(lh, ptr) ((OPENSSL_STRING
*)OPENSSL_LH_retrieve(ossl_check_OPENSSL_STRING_lh_type(lh),
ossl_check_const_OPENSSL_STRING_lh_plain_type(ptr)))
#define lh_OPENSSL_STRING_error(lh) OPENSSL_LH_error(ossl_check_OPENSSL_STRING_lh_type(lh))
#define lh_OPENSSL_STRING_num_items(lh)
OPENSSL_LH_num_items(ossl_check_OPENSSL_STRING_lh_type(lh))
#define lh_OPENSSL_STRING_node_stats_bio(lh, out)
OPENSSL_LH_node_stats_bio(ossl_check_const_OPENSSL_STRING_lh_type(lh), out)
#define lh_OPENSSL_STRING_node_usage_stats_bio(lh, out)
OPENSSL_LH_node_usage_stats_bio(ossl_check_const_OPENSSL_STRING_lh_type(lh), out)
#define lh_OPENSSL_STRING_stats_bio(lh, out)
OPENSSL_LH_stats_bio(ossl_check_const_OPENSSL_STRING_lh_type(lh), out)
#define lh_OPENSSL_STRING_get_down_load(lh)
OPENSSL_LH_get_down_load(ossl_check_OPENSSL_STRING_lh_type(lh))
#define lh_OPENSSL_STRING_set_down_load(lh, dl)
```

```
OPENSSL_LH_set_down_load(ossl_check_OPENSSL_STRING_lh_type(lh), dl)
#define lh_OPENSSL_STRING_doall(lh,
 dfn) OPENSSL_LH_doall(ossl_check_OPENSSL_STRING_lh_type(lh),
ossl_check_OPENSSL_STRING_lh_doallfunc_type(dfn))
DEFINE_LHASH_OF_INTERNAL(OPENSSL_CSTRING);
#define lh_OPENSSL_CSTRING_new(hfn, cmp) ((LHASH_OF(OPENSSL_CSTRING)
*)OPENSSL_LH_new(ossl_check_OPENSSL_CSTRING_lh_hashfunc_type(hfn),
ossl_check_OPENSSL_CSTRING_lh_compfunc_type(cmp)))
#define lh_OPENSSL_CSTRING_free(lh) OPENSSL_LH_free(ossl_check_OPENSSL_CSTRING_lh_type(lh))
#define lh_OPENSSL_CSTRING_flush(lh) OPENSSL_LH_flush(ossl_check_OPENSSL_CSTRING_lh_type(lh))
#define lh_OPENSSL_CSTRING_insert(lh, ptr) ((OPENSSL_CSTRING
*)OPENSSL_LH_insert(ossl_check_OPENSSL_CSTRING_lh_type(lh),
ossl_check_OPENSSL_CSTRING_lh_plain_type(ptr)))
#define lh_OPENSSL_CSTRING_delete(lh, ptr) ((OPENSSL_CSTRING
*)OPENSSL_LH_delete(ossl_check_OPENSSL_CSTRING_lh_type(lh),
ossl_check_const_OPENSSL_CSTRING_lh_plain_type(ptr)))
#define lh_OPENSSL_CSTRING_retrieve(lh, ptr) ((OPENSSL_CSTRING
*)OPENSSL_LH_retrieve(ossl_check_OPENSSL_CSTRING_lh_type(lh),
 ossl_check_const_OPENSSL_CSTRING_lh_plain_type(ptr)))
#define lh_OPENSSL_CSTRING_error(lh) OPENSSL_LH_error(ossl_check_OPENSSL_CSTRING_lh_type(lh))
#define lh_OPENSSL_CSTRING_num_items(lh)
OPENSSL_LH_num_items(ossl_check_OPENSSL_CSTRING_lh_type(lh))
#define lh_OPENSSL_CSTRING_node_stats_bio(lh, out)
OPENSSL_LH_node_stats_bio(ossl_check_const_OPENSSL_CSTRING_lh_type(lh), out)
#define lh_OPENSSL_CSTRING_node_usage_stats_bio(lh, out)
OPENSSL_LH_node_usage_stats_bio(ossl_check_const_OPENSSL_CSTRING_lh_type(lh), out)
#define lh_OPENSSL_CSTRING_stats_bio(lh, out)
OPENSSL_LH_stats_bio(ossl_check_const_OPENSSL_CSTRING_lh_type(lh), out)
#define lh_OPENSSL_CSTRING_get_down_load(lh)
OPENSSL_LH_get_down_load(ossl_check_OPENSSL_CSTRING_lh_type(lh))
#define lh_OPENSSL_CSTRING_set_down_load(lh, dl)
OPENSSL_LH_set_down_load(ossl_check_OPENSSL_CSTRING_lh_type(lh), dl)
#define lh_OPENSSL_CSTRING_doall(lh, dfn)
OPENSSL_LH_doall(ossl_check_OPENSSL_CSTRING_lh_type(lh),
ossl_check_OPENSSL_CSTRING_lh_doallfunc_type(dfn))


#ifdef
  __cplusplus
}
#endif

#endif
{
 'variables': {
   'openssl_sources': [
     'openssl/ssl/bio_ssl.c',
     'openssl/ssl/d1_lib.c',
```

'openssl/ssl/d1_msg.c',
'openssl/ssl/d1_srtp.c',
'openssl/ssl/methods.c',
'openssl/ssl/pqueue.c',
'openssl/ssl/s3_enc.c',
'openssl/ssl/s3_lib.c',
'openssl/ssl/s3_msg.c',
'openssl/ssl/ssl_asn1.c',
'openssl/ssl/ssl_cert.c',
'openssl/ssl/ssl_ciph.c',
'openssl/ssl/ssl_conf.c',
'openssl/ssl/ssl_err.c',
'openssl/ssl/ssl_err_legacy.c',
'openssl/ssl/ssl_init.c',
'openssl/ssl/ssl_lib.c',
'openssl/ssl/ssl_mcnf.c',
'openssl/ssl/ssl_rsa.c',
'openssl/ssl/ssl_rsa_legacy.c',
'openssl/ssl/ssl_sess.c',
'openssl/ssl/ssl_stat.c',
'openssl/ssl/ssl_txt.c',
'openssl/ssl/ssl_utst.c',
'openssl/ssl/t1_enc.c',
'openssl/ssl/t1_lib.c',
'openssl/ssl/t1_trce.c',
'openssl/ssl/tls13_enc.c',
'openssl/ssl/tls_depr.c',
'openssl/ssl/tls_srp.c',
'openssl/ssl/record/dtls1_bitmap.c',
'openssl/ssl/record/rec_layer_d1.c',
'openssl/ssl/record/rec_layer_s3.c',
'openssl/ssl/record/ssl3_buffer.c',
'openssl/ssl/record/ssl3_record.c',
'openssl/ssl/record/ssl3_record_tls13.c',
'openssl/ssl/statem/extensions.c',
'openssl/ssl/statem/extensions_clnt.c',
'openssl/ssl/statem/extensions_cust.c',
'openssl/ssl/statem/extensions_srvr.c',
'openssl/ssl/statem/statem.c',
'openssl/ssl/statem/statem_clnt.c',
'openssl/ssl/statem/statem_dtls.c',
'openssl/ssl/statem/statem_lib.c',
'openssl/ssl/statem/statem_srvr.c',
'openssl/crypto/aes/aes_cfb.c',
'openssl/crypto/aes/aes_ecb.c',
'openssl/crypto/aes/aes_ige.c',
'openssl/crypto/aes/aes_misc.c',
'openssl/crypto/aes/aes_ofb.c',

'openssl/crypto/aes/aes_wrap.c',
'openssl/crypto/aria/aria.c',
'openssl/crypto/asn1/a_bitstr.c',
'openssl/crypto/asn1/a_d2i_fp.c',
'openssl/crypto/asn1/a_digest.c',
'openssl/crypto/asn1/a_dup.c',
'openssl/crypto/asn1/a_gentm.c',
'openssl/crypto/asn1/a_i2d_fp.c',
'openssl/crypto/asn1/a_int.c',
'openssl/crypto/asn1/a_mbstr.c',
'openssl/crypto/asn1/a_object.c',
'openssl/crypto/asn1/a_octet.c',
'openssl/crypto/asn1/a_print.c',
'openssl/crypto/asn1/a_sign.c',
'openssl/crypto/asn1/a_strex.c',
'openssl/crypto/asn1/a_strnid.c',
'openssl/crypto/asn1/a_time.c',
'openssl/crypto/asn1/a_type.c',
'openssl/crypto/asn1/a_utctm.c',
'openssl/crypto/asn1/a_utf8.c',
'openssl/crypto/asn1/a_verify.c',
'openssl/crypto/asn1/ameth_lib.c',
'openssl/crypto/asn1/asn1_err.c',
'openssl/crypto/asn1/asn1_gen.c',
'openssl/crypto/asn1/asn1_item_list.c',
'openssl/crypto/asn1/asn1_lib.c',
'openssl/crypto/asn1/asn1_parse.c',
'openssl/crypto/asn1/asn_mime.c',
'openssl/crypto/asn1/asn_moid.c',
'openssl/crypto/asn1/asn_mstbl.c',
'openssl/crypto/asn1/asn_pack.c',
'openssl/crypto/asn1/bio_asn1.c',
'openssl/crypto/asn1/bio_ndef.c',
'openssl/crypto/asn1/d2i_param.c',
'openssl/crypto/asn1/d2i_pr.c',
'openssl/crypto/asn1/d2i_pu.c',
'openssl/crypto/asn1/evp_asn1.c',
'openssl/crypto/asn1/f_int.c',
'openssl/crypto/asn1/f_string.c',
'openssl/crypto/asn1/i2d_evp.c',
'openssl/crypto/asn1/n_pkey.c',
'openssl/crypto/asn1/nsseq.c',
'openssl/crypto/asn1/p5_pbe.c',
'openssl/crypto/asn1/p5_pbev2.c',
'openssl/crypto/asn1/p5_scrypt.c',
'openssl/crypto/asn1/p8_pkey.c',
'openssl/crypto/asn1/t_bitst.c',
'openssl/crypto/asn1/t_pkey.c',

'openssl/crypto/asn1/t_spki.c',
'openssl/crypto/asn1/tasn_dec.c',
'openssl/crypto/asn1/tasn_enc.c',
'openssl/crypto/asn1/tasn_fre.c',
'openssl/crypto/asn1/tasn_new.c',
'openssl/crypto/asn1/tasn_prn.c',
'openssl/crypto/asn1/tasn_scn.c',
'openssl/crypto/asn1/tasn_typ.c',
'openssl/crypto/asn1/tasn_utl.c',
'openssl/crypto/asn1/x_algor.c',
'openssl/crypto/asn1/x_bignum.c',
'openssl/crypto/asn1/x_info.c',
'openssl/crypto/asn1/x_int64.c',
'openssl/crypto/asn1/x_long.c',
'openssl/crypto/asn1/x_pkey.c',
'openssl/crypto/asn1/x_sig.c',
'openssl/crypto/asn1/x_spki.c',
'openssl/crypto/asn1/x_val.c',
'openssl/crypto/async/arch/async_null.c',
'openssl/crypto/async/arch/async_posix.c',
'openssl/crypto/async/arch/async_win.c',
'openssl/crypto/async/async.c',
'openssl/crypto/async/async_err.c',
'openssl/crypto/async/async_wait.c',
'openssl/crypto/bf/bf_cfb64.c',
'openssl/crypto/bf/bf_ecb.c',
'openssl/crypto/bf/bf_enc.c',
'openssl/crypto/bf/bf_ofb64.c',
'openssl/crypto/bf/bf_skey.c',
'openssl/crypto/bio/bf_buff.c',
'openssl/crypto/bio/bf_lbuf.c',
'openssl/crypto/bio/bf_nbio.c',
'openssl/crypto/bio/bf_null.c',
'openssl/crypto/bio/bf_prefix.c',
'openssl/crypto/bio/bf_readbuff.c',
'openssl/crypto/bio/bio_addr.c',
'openssl/crypto/bio/bio_cb.c',
'openssl/crypto/bio/bio_dump.c',
'openssl/crypto/bio/bio_err.c',
'openssl/crypto/bio/bio_lib.c',
'openssl/crypto/bio/bio_meth.c',
'openssl/crypto/bio/bio_print.c',
'openssl/crypto/bio/bio_sock.c',
'openssl/crypto/bio/bio_sock2.c',
'openssl/crypto/bio/bss_acpt.c',
'openssl/crypto/bio/bss_bio.c',
'openssl/crypto/bio/bss_conn.c',
'openssl/crypto/bio/bss_core.c',

'openssl/crypto/bio/bss_dgram.c',
'openssl/crypto/bio/bss_fd.c',
'openssl/crypto/bio/bss_file.c',
'openssl/crypto/bio/bss_log.c',
'openssl/crypto/bio/bss_mem.c',
'openssl/crypto/bio/bss_null.c',
'openssl/crypto/bio/bss_sock.c',
'openssl/crypto/bio/ossl_core_bio.c',
'openssl/crypto/bn/asm/x86_64-gcc.c',
'openssl/crypto/bn/bn_add.c',
'openssl/crypto/bn/bn_blind.c',
'openssl/crypto/bn/bn_const.c',
'openssl/crypto/bn/bn_conv.c',
'openssl/crypto/bn/bn_ctx.c',
'openssl/crypto/bn/bn_depr.c',
'openssl/crypto/bn/bn_dh.c',
'openssl/crypto/bn/bn_div.c',
'openssl/crypto/bn/bn_err.c',
'openssl/crypto/bn/bn_exp.c',
'openssl/crypto/bn/bn_exp2.c',
'openssl/crypto/bn/bn_gcd.c',
'openssl/crypto/bn/bn_gf2m.c',
'openssl/crypto/bn/bn_intern.c',
'openssl/crypto/bn/bn_kron.c',
'openssl/crypto/bn/bn_lib.c',
'openssl/crypto/bn/bn_mod.c',
'openssl/crypto/bn/bn_mont.c',
'openssl/crypto/bn/bn_mpi.c',
'openssl/crypto/bn/bn_mul.c',
'openssl/crypto/bn/bn_nist.c',
'openssl/crypto/bn/bn_prime.c',
'openssl/crypto/bn/bn_print.c',
'openssl/crypto/bn/bn_rand.c',
'openssl/crypto/bn/bn_recp.c',
'openssl/crypto/bn/bn_rsa_fips186_4.c',
'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_srp.c',
'openssl/crypto/bn/bn_word.c',
'openssl/crypto/bn/bn_x931p.c',
'openssl/crypto/bn/rsaz_exp.c',
'openssl/crypto/bn/rsaz_exp_x2.c',
'openssl/crypto/buffer/buf_err.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/camellia/cmll_cfb.c',
'openssl/crypto/camellia/cmll_ctr.c',
'openssl/crypto/camellia/cmll_ecb.c',

```
    'openssl/crypto/camellia/cmll_misc.c',
    'openssl/crypto/camellia/cmll_ofb.c',
    'openssl/crypto/cast/c_cfb64.c',
    'openssl/crypto/cast/c_ecb.c',
    'openssl/crypto/cast/c_enc.c',
    'openssl/crypto/cast/c_ofb64.c',
    'openssl/crypto/cast/c_skey.c',
    'openssl/crypto/cmac/cmac.c',
    'openssl/crypto/cmp/cmp_asn.c',
    'openssl/crypto/cmp/cmp_client.c',
    'openssl/crypto/cmp/cmp_ctx.c',
    'openssl/crypto/cmp/cmp_err.c',
    'openssl/crypto/cmp/cmp_hdr.c',
    'openssl/crypto/cmp/cmp_http.c',
    'openssl/crypto/cmp/cmp_msg.c',
     'openssl/crypto/cmp/cmp_protect.c',
    'openssl/crypto/cmp/cmp_server.c',
    'openssl/crypto/cmp/cmp_status.c',
    'openssl/crypto/cmp/cmp_util.c',
    'openssl/crypto/cmp/cmp_vfy.c',
    'openssl/crypto/cms/cms_asn1.c',
    'openssl/crypto/cms/cms_att.c',
    'openssl/crypto/cms/cms_cd.c',
    'openssl/crypto/cms/cms_dd.c',
    'openssl/crypto/cms/cms_dh.c',
    'openssl/crypto/cms/cms_ec.c',
    'openssl/crypto/cms/cms_enc.c',
    'openssl/crypto/cms/cms_env.c',
    'openssl/crypto/cms/cms_err.c',
    'openssl/crypto/cms/cms_ess.c',
    'openssl/crypto/cms/cms_io.c',
    'openssl/crypto/cms/cms_kari.c',
    'openssl/crypto/cms/cms_lib.c',
    'openssl/crypto/cms/cms_pwri.c',
    'openssl/crypto/cms/cms_rsa.c',
    'openssl/crypto/cms/cms_sd.c',
    'openssl/crypto/cms/cms_smime.c',
    'openssl/crypto/conf/conf_api.c',
    'openssl/crypto/conf/conf_def.c',
    'openssl/crypto/conf/conf_err.c',

  'openssl/crypto/conf/conf_lib.c',
    'openssl/crypto/conf/conf_mall.c',
    'openssl/crypto/conf/conf_mod.c',
    'openssl/crypto/conf/conf_sap.c',
    'openssl/crypto/conf/conf_ssl.c',
    'openssl/crypto/crmf/crmf_asn.c',
    'openssl/crypto/crmf/crmf_err.c',
```

'openssl/crypto/crmf/crmf_lib.c',
'openssl/crypto/crmf/crmf_pbm.c',
'openssl/crypto/ct/ct_b64.c',
'openssl/crypto/ct/ct_err.c',
'openssl/crypto/ct/ct_log.c',
'openssl/crypto/ct/ct_oct.c',
'openssl/crypto/ct/ct_policy.c',
'openssl/crypto/ct/ct_prn.c',
'openssl/crypto/ct/ct_sct.c',
'openssl/crypto/ct/ct_sct_ctx.c',
'openssl/crypto/ct/ct_vfy.c',
'openssl/crypto/ct/ct_x509v3.c',
'openssl/crypto/des/cbc_cksm.c',
'openssl/crypto/des/cbc_enc.c',
'openssl/crypto/des/cfb64ede.c',
'openssl/crypto/des/cfb64enc.c',
'openssl/crypto/des/cfb_enc.c',
'openssl/crypto/des/des_enc.c',
'openssl/crypto/des/ecb3_enc.c',

'openssl/crypto/des/ecb_enc.c',
'openssl/crypto/des/fcrypt.c',
'openssl/crypto/des/fcrypt_b.c',
'openssl/crypto/des/ofb64ede.c',
'openssl/crypto/des/ofb64enc.c',
'openssl/crypto/des/ofb_enc.c',
'openssl/crypto/des/pcbc_enc.c',
'openssl/crypto/des/qud_cksm.c',
'openssl/crypto/des/rand_key.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/des/str2key.c',
'openssl/crypto/des/xcbc_enc.c',
'openssl/crypto/dh/dh_ameth.c',
'openssl/crypto/dh/dh_asn1.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_depr.c',
'openssl/crypto/dh/dh_err.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dh/dh_meth.c',
'openssl/crypto/dh/dh_pmeth.c',
'openssl/crypto/dh/dh_prn.c',
'openssl/crypto/dh/dh_rfc5114.c',

'openssl/crypto/dsa/dsa_ameth.c',
'openssl/crypto/dsa/dsa_asn1.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_depr.c',
'openssl/crypto/dsa/dsa_err.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_meth.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_pmeth.c',
'openssl/crypto/dsa/dsa_prn.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/dso/dso_dl.c',
'openssl/crypto/dso/dso_dlfcn.c',
'openssl/crypto/dso/dso_err.c',
'openssl/crypto/dso/dso_lib.c',
'openssl/crypto/dso/dso_openssl.c',
'openssl/crypto/dso/dso_vms.c',
'openssl/crypto/dso/dso_win32.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_ameth.c',
'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_deprecated.c',
'openssl/crypto/ec/ec_err.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ec_pmeth.c',
'openssl/crypto/ec/ec_print.c',
'openssl/crypto/ec/ecdh_kdf.c',

'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/eck_prn.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_nistz256.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/ec/ecx_meth.c',
'openssl/crypto/encode_decode/decoder_err.c',
'openssl/crypto/encode_decode/decoder_lib.c',
'openssl/crypto/encode_decode/decoder_meth.c',
'openssl/crypto/encode_decode/decoder_pkey.c',
'openssl/crypto/encode_decode/encoder_err.c',
'openssl/crypto/encode_decode/encoder_lib.c',
'openssl/crypto/encode_decode/encoder_meth.c',
'openssl/crypto/encode_decode/encoder_pkey.c',
'openssl/crypto/engine/eng_all.c',
'openssl/crypto/engine/eng_cnf.c',
'openssl/crypto/engine/eng_ctrl.c',

'openssl/crypto/engine/eng_dyn.c',
'openssl/crypto/engine/eng_err.c',
'openssl/crypto/engine/eng_fat.c',
'openssl/crypto/engine/eng_init.c',
'openssl/crypto/engine/eng_lib.c',
'openssl/crypto/engine/eng_list.c',
'openssl/crypto/engine/eng_openssl.c',
'openssl/crypto/engine/eng_pkey.c',
'openssl/crypto/engine/eng_rdrand.c',
'openssl/crypto/engine/eng_table.c',
'openssl/crypto/engine/tb_asnmth.c',
'openssl/crypto/engine/tb_cipher.c',
'openssl/crypto/engine/tb_dh.c',
'openssl/crypto/engine/tb_digest.c',
'openssl/crypto/engine/tb_dsa.c',
'openssl/crypto/engine/tb_eckey.c',
'openssl/crypto/engine/tb_pkmeth.c',
'openssl/crypto/engine/tb_rand.c',
'openssl/crypto/engine/tb_rsa.c',
'openssl/crypto/err/err.c',
'openssl/crypto/err/err_all.c',
'openssl/crypto/err/err_all_legacy.c',
'openssl/crypto/err/err_blocks.c',

'openssl/crypto/err/err_prn.c',
'openssl/crypto/ess/ess_asn1.c',
'openssl/crypto/ess/ess_err.c',
'openssl/crypto/ess/ess_lib.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/bio_b64.c',
'openssl/crypto/evp/bio_enc.c',
'openssl/crypto/evp/bio_md.c',
'openssl/crypto/evp/bio_ok.c',
'openssl/crypto/evp/c_allc.c',
'openssl/crypto/evp/c_alld.c',
'openssl/crypto/evp/cmeth_lib.c',
'openssl/crypto/evp/ctrl_params_translate.c',
'openssl/crypto/evp/dh_ctrl.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/dsa_ctrl.c',
'openssl/crypto/evp/e_aes.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha1.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha256.c',
'openssl/crypto/evp/e_aria.c',
'openssl/crypto/evp/e_bf.c',
'openssl/crypto/evp/e_camellia.c',
'openssl/crypto/evp/e_cast.c',
'openssl/crypto/evp/e_chacha20_poly1305.c',
'openssl/crypto/evp/e_des.c',
'openssl/crypto/evp/e_des3.c',
'openssl/crypto/evp/e_idea.c',
'openssl/crypto/evp/e_null.c',
'openssl/crypto/evp/e_old.c',
'openssl/crypto/evp/e_rc2.c',
'openssl/crypto/evp/e_rc4.c',
'openssl/crypto/evp/e_rc4_hmac_md5.c',
'openssl/crypto/evp/e_rc5.c',
'openssl/crypto/evp/e_seed.c',
'openssl/crypto/evp/e_sm4.c',
'openssl/crypto/evp/e_xcbc_d.c',
'openssl/crypto/evp/ec_ctrl.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/encode.c',
'openssl/crypto/evp/evp_cnf.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_err.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_key.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_pbe.c',
'openssl/crypto/evp/evp_pkey.c',

'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/legacy_blake2.c',
'openssl/crypto/evp/legacy_md4.c',
'openssl/crypto/evp/legacy_md5.c',
'openssl/crypto/evp/legacy_md5_sha1.c',
'openssl/crypto/evp/legacy_mdc2.c',
'openssl/crypto/evp/legacy_ripemd.c',
'openssl/crypto/evp/legacy_sha.c',
'openssl/crypto/evp/legacy_wp.c',
'openssl/crypto/evp/m_null.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/names.c',
'openssl/crypto/evp/p5_crpt.c',
'openssl/crypto/evp/p5_crpt2.c',
'openssl/crypto/evp/p_dec.c',
'openssl/crypto/evp/p_enc.c',
'openssl/crypto/evp/p_legacy.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/p_open.c',
'openssl/crypto/evp/p_seal.c',
'openssl/crypto/evp/p_sign.c',
'openssl/crypto/evp/p_verify.c',
'openssl/crypto/evp/pbe_scrypt.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/http/http_client.c',
'openssl/crypto/http/http_err.c',
'openssl/crypto/http/http_lib.c',
'openssl/crypto/idea/i_cbc.c',

'openssl/crypto/idea/i_cfb64.c',
'openssl/crypto/idea/i_ecb.c',
'openssl/crypto/idea/i_ofb64.c',
'openssl/crypto/idea/i_skey.c',
'openssl/crypto/kdf/kdf_err.c',
'openssl/crypto/lhash/lh_stats.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpt_err.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/cversion.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ebcdic.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/getenv.c',
'openssl/crypto/info.c',
'openssl/crypto/init.c',
'openssl/crypto/initthread.c',
'openssl/crypto/mem.c',
'openssl/crypto/mem_sec.c',
'openssl/crypto/o_dir.c',
'openssl/crypto/o_fopen.c',
'openssl/crypto/o_init.c',
'openssl/crypto/o_str.c',
'openssl/crypto/o_time.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/passphrase.c',
'openssl/crypto/provider.c',
'openssl/crypto/provider_child.c',
'openssl/crypto/provider_conf.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/punycode.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',

'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/trace.c',
'openssl/crypto/uid.c',
'openssl/crypto/md4/md4_dgst.c',
'openssl/crypto/md4/md4_one.c',
'openssl/crypto/md5/md5_dgst.c',
'openssl/crypto/md5/md5_one.c',
'openssl/crypto/md5/md5_sha1.c',
'openssl/crypto/mdc2/mdc2_one.c',
'openssl/crypto/mdc2/mdc2dgst.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/cts128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ocb128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/siv128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/objects/o_names.c',
'openssl/crypto/objects/obj_dat.c',
'openssl/crypto/objects/obj_err.c',
'openssl/crypto/objects/obj_lib.c',
'openssl/crypto/objects/obj_xref.c',
'openssl/crypto/ocsp/ocsp_asn.c',
'openssl/crypto/ocsp/ocsp_cl.c',
'openssl/crypto/ocsp/ocsp_err.c',
'openssl/crypto/ocsp/ocsp_ext.c',
'openssl/crypto/ocsp/ocsp_http.c',
'openssl/crypto/ocsp/ocsp_lib.c',
'openssl/crypto/ocsp/ocsp_prn.c',
'openssl/crypto/ocsp/ocsp_srv.c',
'openssl/crypto/ocsp/ocsp_vfy.c',
'openssl/crypto/ocsp/v3_ocsp.c',
'openssl/crypto/pem/pem_all.c',
'openssl/crypto/pem/pem_err.c',
'openssl/crypto/pem/pem_info.c',
'openssl/crypto/pem/pem_lib.c',
'openssl/crypto/pem/pem_oth.c',
'openssl/crypto/pem/pem_pk8.c',
'openssl/crypto/pem/pem_pkey.c',
'openssl/crypto/pem/pem_sign.c',
'openssl/crypto/pem/pem_x509.c',
'openssl/crypto/pem/pem_xaux.c',

'openssl/crypto/pem/pvkfmt.c',
'openssl/crypto/pkcs12/p12_add.c',
'openssl/crypto/pkcs12/p12_asn.c',
'openssl/crypto/pkcs12/p12_attr.c',
'openssl/crypto/pkcs12/p12_crpt.c',
'openssl/crypto/pkcs12/p12_crt.c',
'openssl/crypto/pkcs12/p12_decr.c',
'openssl/crypto/pkcs12/p12_init.c',
'openssl/crypto/pkcs12/p12_key.c',
'openssl/crypto/pkcs12/p12_kiss.c',
'openssl/crypto/pkcs12/p12_mutl.c',
'openssl/crypto/pkcs12/p12_npas.c',
'openssl/crypto/pkcs12/p12_p8d.c',
'openssl/crypto/pkcs12/p12_p8e.c',
'openssl/crypto/pkcs12/p12_sbag.c',
'openssl/crypto/pkcs12/p12_utl.c',
'openssl/crypto/pkcs12/pk12err.c',
'openssl/crypto/pkcs7/bio_pk7.c',
'openssl/crypto/pkcs7/pk7_asn1.c',
'openssl/crypto/pkcs7/pk7_attr.c',
'openssl/crypto/pkcs7/pk7_doit.c',
'openssl/crypto/pkcs7/pk7_lib.c',
'openssl/crypto/pkcs7/pk7_mime.c',
'openssl/crypto/pkcs7/pk7_smime.c',
'openssl/crypto/pkcs7/pkcs7err.c',
'openssl/crypto/poly1305/poly1305.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_err.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/prov_seed.c',
'openssl/crypto/rand/rand_deprecated.c',
'openssl/crypto/rand/rand_err.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rand/rand_meth.c',
'openssl/crypto/rand/rand_pool.c',
'openssl/crypto/rand/randfile.c',
'openssl/crypto/rc2/rc2_cbc.c',
'openssl/crypto/rc2/rc2_ecb.c',
'openssl/crypto/rc2/rc2_skey.c',
'openssl/crypto/rc2/rc2cfb64.c',
'openssl/crypto/rc2/rc2ofb64.c',
'openssl/crypto/ripemd/rmd_dgst.c',
'openssl/crypto/ripemd/rmd_one.c',
'openssl/crypto/rsa/rsa_ameth.c',
'openssl/crypto/rsa/rsa_asn1.c',

'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_depr.c',
'openssl/crypto/rsa/rsa_err.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_meth.c',
'openssl/crypto/rsa/rsa_mp.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pmeth.c',
'openssl/crypto/rsa/rsa_prn.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_saos.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/rsa/rsa_x931g.c',
'openssl/crypto/seed/seed.c',
'openssl/crypto/seed/seed_cbc.c',
'openssl/crypto/seed/seed_cfb.c',
'openssl/crypto/seed/seed_ecb.c',
'openssl/crypto/seed/seed_ofb.c',
'openssl/crypto/sha/sha1_one.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/siphash/siphash.c',
'openssl/crypto/sm2/sm2_crypt.c',
'openssl/crypto/sm2/sm2_err.c',
'openssl/crypto/sm2/sm2_key.c',
'openssl/crypto/sm2/sm2_sign.c',
'openssl/crypto/sm3/legacy_sm3.c',
'openssl/crypto/sm3/sm3.c',
'openssl/crypto/sm4/sm4.c',
'openssl/crypto/srp/srp_lib.c',
'openssl/crypto/srp/srp_vfy.c',
'openssl/crypto/stack/stack.c',
'openssl/crypto/store/store_err.c',
'openssl/crypto/store/store_init.c',
'openssl/crypto/store/store_lib.c',

'openssl/crypto/store/store_meth.c',
'openssl/crypto/store/store_register.c',
'openssl/crypto/store/store_result.c',
'openssl/crypto/store/store_strings.c',
'openssl/crypto/ts/ts_asn1.c',
'openssl/crypto/ts/ts_conf.c',
'openssl/crypto/ts/ts_err.c',
'openssl/crypto/ts/ts_lib.c',
'openssl/crypto/ts/ts_req_print.c',
'openssl/crypto/ts/ts_req_utils.c',
'openssl/crypto/ts/ts_rsp_print.c',
'openssl/crypto/ts/ts_rsp_sign.c',
'openssl/crypto/ts/ts_rsp_utils.c',
'openssl/crypto/ts/ts_rsp_verify.c',
'openssl/crypto/ts/ts_verify_ctx.c',
'openssl/crypto/txt_db/txt_db.c',
'openssl/crypto/ui/ui_err.c',
'openssl/crypto/ui/ui_lib.c',
'openssl/crypto/ui/ui_null.c',
'openssl/crypto/ui/ui_openssl.c',
'openssl/crypto/ui/ui_util.c',
'openssl/crypto/whrlpool/wp_dgst.c',
'openssl/crypto/x509/by_dir.c',
'openssl/crypto/x509/by_file.c',
'openssl/crypto/x509/by_store.c',
'openssl/crypto/x509/pcy_cache.c',
'openssl/crypto/x509/pcy_data.c',
'openssl/crypto/x509/pcy_lib.c',
'openssl/crypto/x509/pcy_map.c',
'openssl/crypto/x509/pcy_node.c',
'openssl/crypto/x509/pcy_tree.c',
'openssl/crypto/x509/t_crl.c',
'openssl/crypto/x509/t_req.c',
'openssl/crypto/x509/t_x509.c',
'openssl/crypto/x509/v3_addr.c',
'openssl/crypto/x509/v3_admis.c',
'openssl/crypto/x509/v3_akeya.c',
'openssl/crypto/x509/v3_akid.c',
'openssl/crypto/x509/v3_asid.c',
'openssl/crypto/x509/v3_bcons.c',
'openssl/crypto/x509/v3_bitst.c',
'openssl/crypto/x509/v3_conf.c',
'openssl/crypto/x509/v3_cpols.c',
'openssl/crypto/x509/v3_crld.c',
'openssl/crypto/x509/v3_enum.c',
'openssl/crypto/x509/v3_extku.c',
'openssl/crypto/x509/v3_genn.c',
'openssl/crypto/x509/v3_ia5.c',

'openssl/crypto/x509/v3_info.c',
'openssl/crypto/x509/v3_int.c',
'openssl/crypto/x509/v3_ist.c',
'openssl/crypto/x509/v3_lib.c',
'openssl/crypto/x509/v3_ncons.c',
'openssl/crypto/x509/v3_pci.c',
'openssl/crypto/x509/v3_pcia.c',
'openssl/crypto/x509/v3_pcons.c',
'openssl/crypto/x509/v3_pku.c',
'openssl/crypto/x509/v3_pmaps.c',
'openssl/crypto/x509/v3_prn.c',
'openssl/crypto/x509/v3_purp.c',
'openssl/crypto/x509/v3_san.c',
'openssl/crypto/x509/v3_skid.c',
'openssl/crypto/x509/v3_sxnet.c',
'openssl/crypto/x509/v3_tlsf.c',
'openssl/crypto/x509/v3_utf8.c',
'openssl/crypto/x509/v3_utl.c',
'openssl/crypto/x509/v3err.c',
'openssl/crypto/x509/x509_att.c',
'openssl/crypto/x509/x509_cmp.c',
'openssl/crypto/x509/x509_d2.c',
'openssl/crypto/x509/x509_def.c',
'openssl/crypto/x509/x509_err.c',
'openssl/crypto/x509/x509_ext.c',
'openssl/crypto/x509/x509_lu.c',
'openssl/crypto/x509/x509_meth.c',
'openssl/crypto/x509/x509_obj.c',
'openssl/crypto/x509/x509_r2x.c',
'openssl/crypto/x509/x509_req.c',
'openssl/crypto/x509/x509_set.c',
'openssl/crypto/x509/x509_trust.c',
'openssl/crypto/x509/x509_txt.c',
'openssl/crypto/x509/x509_v3.c',
'openssl/crypto/x509/x509_vfy.c',
'openssl/crypto/x509/x509_vpm.c',
'openssl/crypto/x509/x509cset.c',
'openssl/crypto/x509/x509name.c',
'openssl/crypto/x509/x509rset.c',
'openssl/crypto/x509/x509spki.c',
'openssl/crypto/x509/x509type.c',
'openssl/crypto/x509/x_all.c',
'openssl/crypto/x509/x_attrib.c',
'openssl/crypto/x509/x_crl.c',
'openssl/crypto/x509/x_exten.c',
'openssl/crypto/x509/x_name.c',
'openssl/crypto/x509/x_pubkey.c',

'openssl/crypto/x509/x_req.c',
'openssl/crypto/x509/x_x509.c',
'openssl/crypto/x509/x_x509a.c',
'openssl/engines/e_capi.c',
'openssl/engines/e_devcrypto.c',
'openssl/engines/e_padlock.c',
'openssl/providers/baseprov.c',
'openssl/providers/defltprov.c',
'openssl/providers/nullprov.c',
'openssl/providers/prov_running.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/der/der_sm2_key.c',
'openssl/providers/common/der/der_sm2_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_default.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/asymciphers/sm2_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_hw.c',
'openssl/providers/implementations/ciphers/cipher_camellia.c',
'openssl/providers/implementations/ciphers/cipher_camellia_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20.c',

'openssl/providers/implementations/ciphers/cipher_chacha20_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_null.c',
'openssl/providers/implementations/ciphers/cipher_sm4.c',
'openssl/providers/implementations/ciphers/cipher_sm4_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap_hw.c',
'openssl/providers/implementations/digests/blake2_prov.c',
'openssl/providers/implementations/digests/blake2b_prov.c',

'openssl/providers/implementations/digests/blake2s_prov.c',
'openssl/providers/implementations/digests/md5_prov.c',
'openssl/providers/implementations/digests/md5_sha1_prov.c',
'openssl/providers/implementations/digests/null_prov.c',
'openssl/providers/implementations/digests/ripemd_prov.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/digests/sm3_prov.c',
'openssl/providers/implementations/encode_decode/decode_der2key.c',
'openssl/providers/implementations/encode_decode/decode_epki2pki.c',
'openssl/providers/implementations/encode_decode/decode_msblob2key.c',
'openssl/providers/implementations/encode_decode/decode_pem2der.c',
'openssl/providers/implementations/encode_decode/decode_pvk2key.c',
'openssl/providers/implementations/encode_decode/decode_spki2typespki.c',
'openssl/providers/implementations/encode_decode/encode_key2any.c',
'openssl/providers/implementations/encode_decode/encode_key2blob.c',
'openssl/providers/implementations/encode_decode/encode_key2ms.c',
'openssl/providers/implementations/encode_decode/encode_key2text.c',
'openssl/providers/implementations/encode_decode/endecoder_common.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/krb5kdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/pkcs12kdf.c',
'openssl/providers/implementations/kdfs/scrypt.c',
'openssl/providers/implementations/kdfs/sshkdf.c',

'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/blake2b_mac.c',
'openssl/providers/implementations/macs/blake2s_mac.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/macs/poly1305_prov.c',
'openssl/providers/implementations/macs/siphash_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/seed_src.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/rands/seeding/rand_cpu_x86.c',
'openssl/providers/implementations/rands/seeding/rand_tsc.c',
'openssl/providers/implementations/rands/seeding/rand_unix.c',
'openssl/providers/implementations/rands/seeding/rand_win.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',
'openssl/providers/implementations/signature/sm2_sig.c',
'openssl/providers/implementations/storemgmt/file_store.c',
'openssl/providers/implementations/storemgmt/file_store_any2obj.c',
'openssl/ssl/s3_cbc.c',
'openssl/providers/common/der/der_dsa_key.c',
'openssl/providers/common/der/der_dsa_sig.c',
'openssl/providers/common/der/der_ec_key.c',
'openssl/providers/common/der/der_ec_sig.c',
'openssl/providers/common/der/der_ecx_key.c',
'openssl/providers/common/der/der_rsa_key.c',
'openssl/providers/common/provider_ctx.c',
'openssl/providers/common/provider_err.c',
'openssl/providers/implementations/ciphers/ciphercommon.c',

```
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
   'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish_hw.c',
  'openssl/providers/implementations/ciphers/cipher_cast5.c',
  'openssl/providers/implementations/ciphers/cipher_cast5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_des.c',
  'openssl/providers/implementations/ciphers/cipher_des_hw.c',
  'openssl/providers/implementations/ciphers/cipher_desx.c',
  'openssl/providers/implementations/ciphers/cipher_desx_hw.c',
   'openssl/providers/implementations/ciphers/cipher_idea.c',
  'openssl/providers/implementations/ciphers/cipher_idea_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc2.c',
  'openssl/providers/implementations/ciphers/cipher_rc2_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hw.c',
  'openssl/providers/implementations/ciphers/cipher_seed.c',
  'openssl/providers/implementations/ciphers/cipher_seed_hw.c',
  'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
  'openssl/providers/implementations/digests/md4_prov.c',
  'openssl/providers/implementations/digests/mdc2_prov.c',
  'openssl/providers/implementations/digests/ripemd_prov.c',
  'openssl/providers/implementations/digests/wp_prov.c',
   'openssl/providers/implementations/kdfs/pbkdf1.c',
  'openssl/providers/prov_running.c',
  'openssl/providers/legacyprov.c',
 ],
 'openssl_sources_BSD-x86_64': [
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aes-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aesni-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aesni-sha1-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aesni-sha256-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aesni-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/bsaes-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/vpaes-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/rsaz-avx2.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/rsaz-avx512.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/rsaz-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/x86_64-gf2m.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/x86_64-mont.s',
```

```
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/x86_64-mont5.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/camellia/cmll-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/chacha/chacha-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/ec/ecp_nistz256-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/ec/x25519-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/x86_64cpuid.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/md5/md5-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/modes/aesni-gcm-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/modes/ghash-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/poly1305/poly1305-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/rc4/rc4-md5-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/rc4/rc4-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/keccak1600-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha1-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha1-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha256-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha256-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha512-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/whrlpool/wp-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/engines/e_padlock-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_wrap_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/legacy.ld',
  './config/archs/BSD-x86_64/asm_avx2/providers/fips.ld',
],
'openssl_defines_BSD-x86_64': [
  'NDEBUG',
  'L_ENDIAN',
  'OPENSSL_BUILDING_OPENSSL',
  'AES_ASM',
  'BSAES_ASM',
  'CMLL_ASM',
  'ECP_NISTZ256_ASM',
  'GHASH_ASM',
  'KECCAK1600_ASM',
  'MD5_ASM',
  'OPENSSL_BN_ASM_GF2m',
  'OPENSSL_BN_ASM_MONT',
  'OPENSSL_BN_ASM_MONT5',
  'OPENSSL_CPUID_OBJ',
  'OPENSSL_IA32_SSE2',
  'PADLOCK_ASM',
  'POLY1305_ASM',
```

```
    'RC4_ASM',
    'SHA1_ASM',
    'SHA256_ASM',
    'SHA512_ASM',
    'VPAES_ASM',
    'WHIRLPOOL_ASM',
    'X25519_ASM',
    'OPENSSL_PIC',
  ],
  'openssl_cflags_BSD-x86_64': [
    '-Wa,--noexecstack',
    '-Wall -O3',
    '-pthread',
    '-Wall -O3',
  ],
  'openssl_ex_libs_BSD-x86_64': [
    '-pthread',
  ],
 },
 'include_dirs': [
  '.',
  './include',

  './crypto',
  './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86_64)'],
 'cflags' : ['<@(openssl_cflags_BSD-x86_64)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],
 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86_64)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86_64)'],
 },
}
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/ct.h.in
*
* Copyright 2016-2020 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/
```

```
#ifndef OPENSSL_CT_H
# define OPENSSL_CT_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_CT_H
# endif

# include <openssl/opensslconf.h>

# ifndef OPENSSL_NO_CT
# include <openssl/types.h>
# include <openssl/safestack.h>
# include <openssl/x509.h>
# include <openssl/cterr.h>
# ifdef  __cplusplus
extern "C" {
# endif


/* Minimum RSA key size, from RFC6962 */
# define SCT_MIN_RSA_BITS 2048

/* All hashes are SHA256 in v1 of Certificate Transparency */
# define CT_V1_HASHLEN SHA256_DIGEST_LENGTH

SKM_DEFINE_STACK_OF_INTERNAL(SCT,
 SCT, SCT)
#define sk_SCT_num(sk) OPENSSL_sk_num(ossl_check_const_SCT_sk_type(sk))
#define sk_SCT_value(sk, idx) ((SCT *)OPENSSL_sk_value(ossl_check_const_SCT_sk_type(sk), (idx)))
#define sk_SCT_new(cmp) ((STACK_OF(SCT) *)OPENSSL_sk_new(ossl_check_SCT_compfunc_type(cmp)))
#define sk_SCT_new_null() ((STACK_OF(SCT) *)OPENSSL_sk_new_null())
#define sk_SCT_new_reserve(cmp, n) ((STACK_OF(SCT)
*)OPENSSL_sk_new_reserve(ossl_check_SCT_compfunc_type(cmp), (n)))
#define sk_SCT_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_SCT_sk_type(sk), (n))
#define sk_SCT_free(sk) OPENSSL_sk_free(ossl_check_SCT_sk_type(sk))
#define sk_SCT_zero(sk) OPENSSL_sk_zero(ossl_check_SCT_sk_type(sk))
#define sk_SCT_delete(sk, i) ((SCT *)OPENSSL_sk_delete(ossl_check_SCT_sk_type(sk), (i)))
#define sk_SCT_delete_ptr(sk, ptr) ((SCT *)OPENSSL_sk_delete_ptr(ossl_check_SCT_sk_type(sk),
ossl_check_SCT_type(ptr)))
#define sk_SCT_push(sk, ptr) OPENSSL_sk_push(ossl_check_SCT_sk_type(sk), ossl_check_SCT_type(ptr))
#define sk_SCT_unshift(sk,
 ptr) OPENSSL_sk_unshift(ossl_check_SCT_sk_type(sk), ossl_check_SCT_type(ptr))
#define sk_SCT_pop(sk) ((SCT *)OPENSSL_sk_pop(ossl_check_SCT_sk_type(sk)))
#define sk_SCT_shift(sk) ((SCT *)OPENSSL_sk_shift(ossl_check_SCT_sk_type(sk)))
```

```
#define sk_SCT_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_SCT_sk_type(sk),ossl_check_SCT_freefunc_type(freefunc))
#define sk_SCT_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_SCT_sk_type(sk), ossl_check_SCT_type(ptr),
(idx))
#define sk_SCT_set(sk, idx, ptr) ((SCT *)OPENSSL_sk_set(ossl_check_SCT_sk_type(sk), (idx),
ossl_check_SCT_type(ptr)))
#define sk_SCT_find(sk, ptr) OPENSSL_sk_find(ossl_check_SCT_sk_type(sk), ossl_check_SCT_type(ptr))
#define sk_SCT_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_SCT_sk_type(sk), ossl_check_SCT_type(ptr))
#define sk_SCT_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_SCT_sk_type(sk),
ossl_check_SCT_type(ptr), pnum)
#define sk_SCT_sort(sk) OPENSSL_sk_sort(ossl_check_SCT_sk_type(sk))
#define
 sk_SCT_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_SCT_sk_type(sk))
#define sk_SCT_dup(sk) ((STACK_OF(SCT) *)OPENSSL_sk_dup(ossl_check_const_SCT_sk_type(sk)))
#define sk_SCT_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(SCT)
*)OPENSSL_sk_deep_copy(ossl_check_const_SCT_sk_type(sk), ossl_check_SCT_copyfunc_type(copyfunc),
ossl_check_SCT_freefunc_type(freefunc)))
#define sk_SCT_set_cmp_func(sk, cmp)
((sk_SCT_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_SCT_sk_type(sk),
ossl_check_SCT_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(CTLOG, CTLOG, CTLOG)
#define sk_CTLOG_num(sk) OPENSSL_sk_num(ossl_check_const_CTLOG_sk_type(sk))
#define sk_CTLOG_value(sk, idx) ((CTLOG *)OPENSSL_sk_value(ossl_check_const_CTLOG_sk_type(sk),
(idx)))
#define sk_CTLOG_new(cmp) ((STACK_OF(CTLOG)
*)OPENSSL_sk_new(ossl_check_CTLOG_compfunc_type(cmp)))
#define sk_CTLOG_new_null() ((STACK_OF(CTLOG) *)OPENSSL_sk_new_null())
#define sk_CTLOG_new_reserve(cmp, n) ((STACK_OF(CTLOG)
*)OPENSSL_sk_new_reserve(ossl_check_CTLOG_compfunc_type(cmp),
 (n)))
#define sk_CTLOG_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_CTLOG_sk_type(sk), (n))
#define sk_CTLOG_free(sk) OPENSSL_sk_free(ossl_check_CTLOG_sk_type(sk))
#define sk_CTLOG_zero(sk) OPENSSL_sk_zero(ossl_check_CTLOG_sk_type(sk))
#define sk_CTLOG_delete(sk, i) ((CTLOG *)OPENSSL_sk_delete(ossl_check_CTLOG_sk_type(sk), (i)))
#define sk_CTLOG_delete_ptr(sk, ptr) ((CTLOG *)OPENSSL_sk_delete_ptr(ossl_check_CTLOG_sk_type(sk),
ossl_check_CTLOG_type(ptr)))
#define sk_CTLOG_push(sk, ptr) OPENSSL_sk_push(ossl_check_CTLOG_sk_type(sk),
ossl_check_CTLOG_type(ptr))
#define sk_CTLOG_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_CTLOG_sk_type(sk),
ossl_check_CTLOG_type(ptr))
#define sk_CTLOG_pop(sk) ((CTLOG *)OPENSSL_sk_pop(ossl_check_CTLOG_sk_type(sk)))
#define sk_CTLOG_shift(sk) ((CTLOG *)OPENSSL_sk_shift(ossl_check_CTLOG_sk_type(sk)))
#define sk_CTLOG_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_CTLOG_sk_type(sk),ossl_check_CTLOG_freefunc_type(freefunc))
#define
 sk_CTLOG_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_CTLOG_sk_type(sk),
ossl_check_CTLOG_type(ptr), (idx))
#define sk_CTLOG_set(sk, idx, ptr) ((CTLOG *)OPENSSL_sk_set(ossl_check_CTLOG_sk_type(sk), (idx),
```

```
ossl_check_CTLOG_type(ptr)))
#define sk_CTLOG_find(sk, ptr) OPENSSL_sk_find(ossl_check_CTLOG_sk_type(sk),
ossl_check_CTLOG_type(ptr))
#define sk_CTLOG_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_CTLOG_sk_type(sk),
ossl_check_CTLOG_type(ptr))
#define sk_CTLOG_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_CTLOG_sk_type(sk),
ossl_check_CTLOG_type(ptr), pnum)
#define sk_CTLOG_sort(sk) OPENSSL_sk_sort(ossl_check_CTLOG_sk_type(sk))
#define sk_CTLOG_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_CTLOG_sk_type(sk))
#define sk_CTLOG_dup(sk) ((STACK_OF(CTLOG)
*)OPENSSL_sk_dup(ossl_check_const_CTLOG_sk_type(sk)))
#define sk_CTLOG_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(CTLOG)
*)OPENSSL_sk_deep_copy(ossl_check_const_CTLOG_sk_type(sk),
ossl_check_CTLOG_copyfunc_type(copyfunc),
 ossl_check_CTLOG_freefunc_type(freefunc)))
#define sk_CTLOG_set_cmp_func(sk, cmp)
((sk_CTLOG_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_CTLOG_sk_type(sk),
ossl_check_CTLOG_compfunc_type(cmp)))



typedef enum {
  CT_LOG_ENTRY_TYPE_NOT_SET = -1,
  CT_LOG_ENTRY_TYPE_X509 = 0,
  CT_LOG_ENTRY_TYPE_PRECERT = 1
} ct_log_entry_type_t;

typedef enum {
  SCT_VERSION_NOT_SET = -1,
  SCT_VERSION_V1 = 0
} sct_version_t;

typedef enum {
  SCT_SOURCE_UNKNOWN,
  SCT_SOURCE_TLS_EXTENSION,
  SCT_SOURCE_X509V3_EXTENSION,
  SCT_SOURCE_OCSP_STAPLED_RESPONSE
} sct_source_t;

typedef enum {
  SCT_VALIDATION_STATUS_NOT_SET,
  SCT_VALIDATION_STATUS_UNKNOWN_LOG,
  SCT_VALIDATION_STATUS_VALID,
  SCT_VALIDATION_STATUS_INVALID,
  SCT_VALIDATION_STATUS_UNVERIFIED,
  SCT_VALIDATION_STATUS_UNKNOWN_VERSION
} sct_validation_status_t;
```

```
/**********************************************
* CT policy evaluation context functions *
**********************************************/

/*
 * Creates a new, empty policy evaluation context associated with the given
* library context and property query string.
* The caller is responsible for calling CT_POLICY_EVAL_CTX_free when finished
* with the CT_POLICY_EVAL_CTX.
*/
CT_POLICY_EVAL_CTX *CT_POLICY_EVAL_CTX_new_ex(OSSL_LIB_CTX *libctx,
                                              const char *propq);

/*
* The same as CT_POLICY_EVAL_CTX_new_ex() but the default library
* context and property query string is used.
*/
CT_POLICY_EVAL_CTX *CT_POLICY_EVAL_CTX_new(void);

/* Deletes a policy evaluation context and anything it owns. */
void CT_POLICY_EVAL_CTX_free(CT_POLICY_EVAL_CTX *ctx);

/* Gets the peer certificate that the SCTs are for */
X509* CT_POLICY_EVAL_CTX_get0_cert(const CT_POLICY_EVAL_CTX *ctx);

/*
* Sets the certificate associated with the received SCTs.
* Increments the reference count of cert.
* Returns 1 on success, 0 otherwise.
*/
int CT_POLICY_EVAL_CTX_set1_cert(CT_POLICY_EVAL_CTX
 *ctx, X509 *cert);

/* Gets the issuer of the aforementioned certificate */
X509* CT_POLICY_EVAL_CTX_get0_issuer(const CT_POLICY_EVAL_CTX *ctx);

/*
* Sets the issuer of the certificate associated with the received SCTs.
* Increments the reference count of issuer.
* Returns 1 on success, 0 otherwise.
*/
int CT_POLICY_EVAL_CTX_set1_issuer(CT_POLICY_EVAL_CTX *ctx, X509 *issuer);

/* Gets the CT logs that are trusted sources of SCTs */
const CTLOG_STORE *CT_POLICY_EVAL_CTX_get0_log_store(const CT_POLICY_EVAL_CTX *ctx);

/* Sets the log store that is in use. It must outlive the CT_POLICY_EVAL_CTX. */
void CT_POLICY_EVAL_CTX_set_shared_CTLOG_STORE(CT_POLICY_EVAL_CTX *ctx,
```

```
                                CTLOG_STORE *log_store);

/*
* Gets the time, in milliseconds since the Unix epoch, that will be used as the
* current time when checking whether an SCT was issued in the future.
* Such SCTs will fail validation, as required by RFC6962.
 */
uint64_t CT_POLICY_EVAL_CTX_get_time(const CT_POLICY_EVAL_CTX *ctx);

/*
* Sets the time to evaluate SCTs against, in milliseconds since the Unix epoch.
* If an SCT's timestamp is after this time, it will be interpreted as having
* been issued in the future. RFC6962 states that "TLS clients MUST reject SCTs
* whose timestamp is in the future", so an SCT will not validate in this case.
*/
void CT_POLICY_EVAL_CTX_set_time(CT_POLICY_EVAL_CTX *ctx, uint64_t time_in_ms);

/******************
* SCT functions *
******************/

/*
* Creates a new, blank SCT.
* The caller is responsible for calling SCT_free when finished with the SCT.
*/
SCT *SCT_new(void);

/*
* Creates a new SCT from some base64-encoded strings.
* The caller is responsible for calling SCT_free when finished with the SCT.
*/
SCT *SCT_new_from_base64(unsigned char version,
                         const char *logid_base64,
                         ct_log_entry_type_t entry_type,

  uint64_t timestamp,
                         const char *extensions_base64,
                         const char *signature_base64);

/*
* Frees the SCT and the underlying data structures.
*/
void SCT_free(SCT *sct);

/*
* Free a stack of SCTs, and the underlying SCTs themselves.
* Intended to be compatible with X509V3_EXT_FREE.
*/
```

```
void SCT_LIST_free(STACK_OF(SCT) *a);

/*
* Returns the version of the SCT.
*/
sct_version_t SCT_get_version(const SCT *sct);

/*
* Set the version of an SCT.
* Returns 1 on success, 0 if the version is unrecognized.
*/
__owur int SCT_set_version(SCT *sct, sct_version_t version);

/*
* Returns the log entry type of the SCT.
*/
ct_log_entry_type_t SCT_get_log_entry_type(const SCT *sct);

/*
* Set the log entry type of an SCT.
* Returns 1 on success, 0 otherwise.
*/
__owur int SCT_set_log_entry_type(SCT *sct, ct_log_entry_type_t entry_type);

/*
* Gets the ID of the log that an SCT came from.
* Ownership of the log ID remains with the SCT.
*
 Returns the length of the log ID.
*/
size_t SCT_get0_log_id(const SCT *sct, unsigned char **log_id);

/*
* Set the log ID of an SCT to point directly to the *log_id specified.
* The SCT takes ownership of the specified pointer.
* Returns 1 on success, 0 otherwise.
*/
__owur int SCT_set0_log_id(SCT *sct, unsigned char *log_id, size_t log_id_len);

/*
* Set the log ID of an SCT.
* This makes a copy of the log_id.
* Returns 1 on success, 0 otherwise.
*/
__owur int SCT_set1_log_id(SCT *sct, const unsigned char *log_id,
                           size_t log_id_len);

/*
```

```
* Returns the timestamp for the SCT (epoch time in milliseconds).
*/
uint64_t SCT_get_timestamp(const SCT *sct);

/*
* Set the timestamp of an SCT (epoch time in milliseconds).
*/
void SCT_set_timestamp(SCT *sct, uint64_t timestamp);

/*
* Return the NID for the signature used by the SCT.
* For CT v1, this will be either NID_sha256WithRSAEncryption or
* NID_ecdsa_with_SHA256 (or NID_undef if incorrect/unset).
 */
int SCT_get_signature_nid(const SCT *sct);

/*
* Set the signature type of an SCT
* For CT v1, this should be either NID_sha256WithRSAEncryption or
* NID_ecdsa_with_SHA256.
* Returns 1 on success, 0 otherwise.
*/
__owur int SCT_set_signature_nid(SCT *sct, int nid);

/*
* Set *ext to point to the extension data for the SCT. ext must not be NULL.
* The SCT retains ownership of this pointer.
* Returns length of the data pointed to.
*/
size_t SCT_get0_extensions(const SCT *sct, unsigned char **ext);

/*
* Set the extensions of an SCT to point directly to the *ext specified.
* The SCT takes ownership of the specified pointer.
*/
void SCT_set0_extensions(SCT *sct, unsigned char *ext, size_t ext_len);

/*
* Set the extensions of an SCT.
* This takes a copy of the ext.
* Returns 1 on success, 0 otherwise.
*/
__owur int SCT_set1_extensions(SCT *sct, const unsigned char *ext,
                               size_t ext_len);

/*
* Set *sig to point to the signature for the SCT.
```

```
 sig must not be NULL.
* The SCT retains ownership of this pointer.
* Returns length of the data pointed to.
*/
size_t SCT_get0_signature(const SCT *sct, unsigned char **sig);

/*
* Set the signature of an SCT to point directly to the *sig specified.
* The SCT takes ownership of the specified pointer.
*/
void SCT_set0_signature(SCT *sct, unsigned char *sig, size_t sig_len);

/*
* Set the signature of an SCT to be a copy of the *sig specified.
* Returns 1 on success, 0 otherwise.
*/
__owur int SCT_set1_signature(SCT *sct, const unsigned char *sig,
                              size_t sig_len);

/*
* The origin of this SCT, e.g. TLS extension, OCSP response, etc.
*/
sct_source_t SCT_get_source(const SCT *sct);

/*
* Set the origin of this SCT, e.g. TLS extension, OCSP response, etc.
* Returns 1 on success, 0 otherwise.
*/
__owur int SCT_set_source(SCT *sct, sct_source_t source);

/*
* Returns a text string describing the validation status of |sct|.
*/
const char *SCT_validation_status_string(const
 SCT *sct);

/*
* Pretty-prints an |sct| to |out|.
* It will be indented by the number of spaces specified by |indent|.
* If |logs| is not NULL, it will be used to lookup the CT log that the SCT came
* from, so that the log name can be printed.
*/
void SCT_print(const SCT *sct, BIO *out, int indent, const CTLOG_STORE *logs);

/*
* Pretty-prints an |sct_list| to |out|.
* It will be indented by the number of spaces specified by |indent|.
* SCTs will be delimited by |separator|.
```

```
* If |logs| is not NULL, it will be used to lookup the CT log that each SCT
* came from, so that the log names can be printed.
*/
void SCT_LIST_print(const STACK_OF(SCT) *sct_list, BIO *out, int indent,
                    const char *separator, const CTLOG_STORE *logs);

/*
* Gets the last result of validating this SCT.
* If it has not been validated yet, returns SCT_VALIDATION_STATUS_NOT_SET.
*/
sct_validation_status_t SCT_get_validation_status(const SCT *sct);

/*
* Validates
 the given SCT with the provided context.
* Sets the "validation_status" field of the SCT.
* Returns 1 if the SCT is valid and the signature verifies.
* Returns 0 if the SCT is invalid or could not be verified.
* Returns -1 if an error occurs.
*/
__owur int SCT_validate(SCT *sct, const CT_POLICY_EVAL_CTX *ctx);

/*
* Validates the given list of SCTs with the provided context.
* Sets the "validation_status" field of each SCT.
* Returns 1 if there are no invalid SCTs and all signatures verify.
* Returns 0 if at least one SCT is invalid or could not be verified.
* Returns a negative integer if an error occurs.
*/
__owur int SCT_LIST_validate(const STACK_OF(SCT) *scts,
                             CT_POLICY_EVAL_CTX *ctx);


/**********************************
* SCT parsing and serialization *
**********************************/

/*
* Serialize (to TLS format) a stack of SCTs and return the length.
* "a" must not be NULL.
* If "pp" is NULL, just return the length of what
 would have been serialized.
* If "pp" is not NULL and "*pp" is null, function will allocate a new pointer
* for data that caller is responsible for freeing (only if function returns
* successfully).
* If "pp" is NULL and "*pp" is not NULL, caller is responsible for ensuring
* that "*pp" is large enough to accept all of the serialized data.
* Returns < 0 on error, >= 0 indicating bytes written (or would have been)
```

```
* on success.
*/
__owur int i2o_SCT_LIST(const STACK_OF(SCT) *a, unsigned char **pp);

/*
* Convert TLS format SCT list to a stack of SCTs.
* If "a" or "*a" is NULL, a new stack will be created that the caller is
* responsible for freeing (by calling SCT_LIST_free).
* "**pp" and "*pp" must not be NULL.
* Upon success, "*pp" will point to after the last bytes read, and a stack
* will be returned.
* Upon failure, a NULL pointer will be returned, and the position of "*pp" is
* not defined.
*/
STACK_OF(SCT) *o2i_SCT_LIST(STACK_OF(SCT) **a, const unsigned char
 **pp,
                            size_t len);

/*
* Serialize (to DER format) a stack of SCTs and return the length.
* "a" must not be NULL.
* If "pp" is NULL, just returns the length of what would have been serialized.
* If "pp" is not NULL and "*pp" is null, function will allocate a new pointer
* for data that caller is responsible for freeing (only if function returns
* successfully).
* If "pp" is NULL and "*pp" is not NULL, caller is responsible for ensuring
* that "*pp" is large enough to accept all of the serialized data.
* Returns < 0 on error, >= 0 indicating bytes written (or would have been)
* on success.
*/
__owur int i2d_SCT_LIST(const STACK_OF(SCT) *a, unsigned char **pp);

/*
* Parses an SCT list in DER format and returns it.
* If "a" or "*a" is NULL, a new stack will be created that the caller is
* responsible for freeing (by calling SCT_LIST_free).
* "**pp" and "*pp" must not be NULL.
* Upon success, "*pp" will point to after the last bytes read, and a
 stack
* will be returned.
* Upon failure, a NULL pointer will be returned, and the position of "*pp" is
* not defined.
*/
STACK_OF(SCT) *d2i_SCT_LIST(STACK_OF(SCT) **a, const unsigned char **pp,
                            long len);

/*
* Serialize (to TLS format) an |sct| and write it to |out|.
```

```
* If |out| is null, no SCT will be output but the length will still be returned.
* If |out| points to a null pointer, a string will be allocated to hold the
* TLS-format SCT. It is the responsibility of the caller to free it.
* If |out| points to an allocated string, the TLS-format SCT will be written
* to it.
* The length of the SCT in TLS format will be returned.
*/
__owur int i2o_SCT(const SCT *sct, unsigned char **out);

/*
* Parses an SCT in TLS format and returns it.
* If |psct| is not null, it will end up pointing to the parsed SCT. If it
* already points to a non-null pointer, the pointer will be free'd.
* |in| should be a pointer to a string containing the TLS-format SCT.
 * |in| will be advanced to the end of the SCT if parsing succeeds.
* |len| should be the length of the SCT in |in|.
* Returns NULL if an error occurs.
* If the SCT is an unsupported version, only the SCT's 'sct' and 'sct_len'
* fields will be populated (with |in| and |len| respectively).
*/
SCT *o2i_SCT(SCT **psct, const unsigned char **in, size_t len);

/**********************
* CT log functions *
**********************/

/*
* Creates a new CT log instance with the given |public_key| and |name| and
* associates it with the give library context |libctx| and property query
* string |propq|.
* Takes ownership of |public_key| but copies |name|.
* Returns NULL if malloc fails or if |public_key| cannot be converted to DER.
* Should be deleted by the caller using CTLOG_free when no longer needed.
*/
CTLOG *CTLOG_new_ex(EVP_PKEY *public_key, const char *name, OSSL_LIB_CTX *libctx,
                    const char *propq);

/*
* The same as CTLOG_new_ex except that the default library
 context and
* property query string are used.
*/
CTLOG *CTLOG_new(EVP_PKEY *public_key, const char *name);

/*
* Creates a new CTLOG instance with the base64-encoded SubjectPublicKeyInfo DER
* in |pkey_base64| and associated with the given library context |libctx| and
* property query string |propq|. The |name| is a string to help users identify
```

```
* this log.
* Returns 1 on success, 0 on failure.
* Should be deleted by the caller using CTLOG_free when no longer needed.
*/
int CTLOG_new_from_base64_ex(CTLOG **ct_log, const char *pkey_base64,
                             const char *name, OSSL_LIB_CTX *libctx,
                             const char *propq);

/*
* The same as CTLOG_new_from_base64_ex() except that the default
* library context and property query string are used.
* Returns 1 on success, 0 on failure.
*/
int CTLOG_new_from_base64(CTLOG ** ct_log,
                          const char *pkey_base64, const char *name);

/*
* Deletes a CT log instance and its
 fields.
*/
void CTLOG_free(CTLOG *log);

/* Gets the name of the CT log */
const char *CTLOG_get0_name(const CTLOG *log);
/* Gets the ID of the CT log */
void CTLOG_get0_log_id(const CTLOG *log, const uint8_t **log_id,
                       size_t *log_id_len);
/* Gets the public key of the CT log */
EVP_PKEY *CTLOG_get0_public_key(const CTLOG *log);

/**************************
* CT log store functions *
**************************/

/*
* Creates a new CT log store and associates it with the given libctx and
* property query string.
* Should be deleted by the caller using CTLOG_STORE_free when no longer needed.
*/
CTLOG_STORE *CTLOG_STORE_new_ex(OSSL_LIB_CTX *libctx, const char *propq);

/*
* Same as CTLOG_STORE_new_ex except that the default libctx and
* property query string are used.
* Should be deleted by the caller using CTLOG_STORE_free when no longer needed.
*/
CTLOG_STORE *CTLOG_STORE_new(void);
```

```
/*
* Deletes a CT log store and all of the CT log instances held within.
 */
void CTLOG_STORE_free(CTLOG_STORE *store);

/*
* Finds a CT log in the store based on its log ID.
* Returns the CT log, or NULL if no match is found.
*/
const CTLOG *CTLOG_STORE_get0_log_by_id(const CTLOG_STORE *store,
                                        const uint8_t *log_id,
                                        size_t log_id_len);

/*
* Loads a CT log list into a |store| from a |file|.
* Returns 1 if loading is successful, or 0 otherwise.
*/
__owur int CTLOG_STORE_load_file(CTLOG_STORE *store, const char *file);

/*
* Loads the default CT log list into a |store|.
* Returns 1 if loading is successful, or 0 otherwise.
*/
__owur int CTLOG_STORE_load_default_file(CTLOG_STORE *store);

#  ifdef  __cplusplus
}
#  endif
# endif
#endif
```

The ISC License

Copyright (c) npm Inc.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
Copyright James Halliday (mail@substack.net) and Isaac Z. Schlueter (i@izs.me)

This project is free software released under the MIT license:

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY,
WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.
Copyright (c) Ben Briggs <beneb.info@gmail.com> (http://beneb.info)

Permission is hereby granted, free of charge, to any person
obtaining a copy of this software and associated documentation
files (the "Software"), to deal in the Software without
restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following
conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT
HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
OTHER DEALINGS IN THE SOFTWARE.
The ISC License

Copyright (c) npm, Inc. and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above

copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/pkcs12.h.in
*
* Copyright 1999-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_PKCS12_H
# define OPENSSL_PKCS12_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_PKCS12_H
# endif

# include <openssl/bio.h>
# include <openssl/core.h>
# include <openssl/x509.h>
# include <openssl/pkcs12err.h>

#ifdef __cplusplus
extern "C" {
#endif

# define PKCS12_KEY_ID   1
# define PKCS12_IV_ID    2
# define PKCS12_MAC_ID   3

/* Default iteration count */
# ifndef PKCS12_DEFAULT_ITER
#  define PKCS12_DEFAULT_ITER     PKCS5_DEFAULT_ITER
```

```
# endif

# define PKCS12_MAC_KEY_LENGTH 20

# define PKCS12_SALT_LEN
 8

/* It's not clear if these are actually needed... */
# define PKCS12_key_gen PKCS12_key_gen_utf8
# define PKCS12_add_friendlyname PKCS12_add_friendlyname_utf8

/* MS key usage constants */

# define KEY_EX  0x10
# define KEY_SIG 0x80

typedef struct PKCS12_MAC_DATA_st PKCS12_MAC_DATA;

typedef struct PKCS12_st PKCS12;

typedef struct PKCS12_SAFEBAG_st PKCS12_SAFEBAG;

SKM_DEFINE_STACK_OF_INTERNAL(PKCS12_SAFEBAG, PKCS12_SAFEBAG, PKCS12_SAFEBAG)
#define sk_PKCS12_SAFEBAG_num(sk)
OPENSSL_sk_num(ossl_check_const_PKCS12_SAFEBAG_sk_type(sk))
#define sk_PKCS12_SAFEBAG_value(sk, idx) ((PKCS12_SAFEBAG
*)OPENSSL_sk_value(ossl_check_const_PKCS12_SAFEBAG_sk_type(sk), (idx)))
#define sk_PKCS12_SAFEBAG_new(cmp) ((STACK_OF(PKCS12_SAFEBAG)
*)OPENSSL_sk_new(ossl_check_PKCS12_SAFEBAG_compfunc_type(cmp)))
#define sk_PKCS12_SAFEBAG_new_null() ((STACK_OF(PKCS12_SAFEBAG) *)OPENSSL_sk_new_null())
#define sk_PKCS12_SAFEBAG_new_reserve(cmp, n) ((STACK_OF(PKCS12_SAFEBAG)
*)OPENSSL_sk_new_reserve(ossl_check_PKCS12_SAFEBAG_compfunc_type(cmp),
 (n)))
#define sk_PKCS12_SAFEBAG_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_PKCS12_SAFEBAG_sk_type(sk), (n))
#define sk_PKCS12_SAFEBAG_free(sk) OPENSSL_sk_free(ossl_check_PKCS12_SAFEBAG_sk_type(sk))
#define sk_PKCS12_SAFEBAG_zero(sk) OPENSSL_sk_zero(ossl_check_PKCS12_SAFEBAG_sk_type(sk))
#define sk_PKCS12_SAFEBAG_delete(sk, i) ((PKCS12_SAFEBAG
*)OPENSSL_sk_delete(ossl_check_PKCS12_SAFEBAG_sk_type(sk), (i)))
#define sk_PKCS12_SAFEBAG_delete_ptr(sk, ptr) ((PKCS12_SAFEBAG
*)OPENSSL_sk_delete_ptr(ossl_check_PKCS12_SAFEBAG_sk_type(sk),
ossl_check_PKCS12_SAFEBAG_type(ptr)))
#define sk_PKCS12_SAFEBAG_push(sk, ptr) OPENSSL_sk_push(ossl_check_PKCS12_SAFEBAG_sk_type(sk),
ossl_check_PKCS12_SAFEBAG_type(ptr))
#define sk_PKCS12_SAFEBAG_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_PKCS12_SAFEBAG_sk_type(sk), ossl_check_PKCS12_SAFEBAG_type(ptr))
#define sk_PKCS12_SAFEBAG_pop(sk) ((PKCS12_SAFEBAG
*)OPENSSL_sk_pop(ossl_check_PKCS12_SAFEBAG_sk_type(sk)))
```

```
#define
 sk_PKCS12_SAFEBAG_shift(sk) ((PKCS12_SAFEBAG
*)OPENSSL_sk_shift(ossl_check_PKCS12_SAFEBAG_sk_type(sk)))
#define sk_PKCS12_SAFEBAG_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_PKCS12_SAFEBAG_sk_type(sk),ossl_check_PKCS12_SAFEBAG_freefunc_
type(freefunc))
#define sk_PKCS12_SAFEBAG_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_PKCS12_SAFEBAG_sk_type(sk), ossl_check_PKCS12_SAFEBAG_type(ptr),
(idx))
#define sk_PKCS12_SAFEBAG_set(sk, idx, ptr) ((PKCS12_SAFEBAG
*)OPENSSL_sk_set(ossl_check_PKCS12_SAFEBAG_sk_type(sk), (idx),
ossl_check_PKCS12_SAFEBAG_type(ptr)))
#define sk_PKCS12_SAFEBAG_find(sk, ptr) OPENSSL_sk_find(ossl_check_PKCS12_SAFEBAG_sk_type(sk),
ossl_check_PKCS12_SAFEBAG_type(ptr))
#define sk_PKCS12_SAFEBAG_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_PKCS12_SAFEBAG_sk_type(sk), ossl_check_PKCS12_SAFEBAG_type(ptr))
#define sk_PKCS12_SAFEBAG_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_PKCS12_SAFEBAG_sk_type(sk), ossl_check_PKCS12_SAFEBAG_type(ptr),
pnum)
#define
 sk_PKCS12_SAFEBAG_sort(sk) OPENSSL_sk_sort(ossl_check_PKCS12_SAFEBAG_sk_type(sk))
#define sk_PKCS12_SAFEBAG_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_PKCS12_SAFEBAG_sk_type(sk))
#define sk_PKCS12_SAFEBAG_dup(sk) ((STACK_OF(PKCS12_SAFEBAG)
*)OPENSSL_sk_dup(ossl_check_const_PKCS12_SAFEBAG_sk_type(sk)))
#define sk_PKCS12_SAFEBAG_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(PKCS12_SAFEBAG)
*)OPENSSL_sk_deep_copy(ossl_check_const_PKCS12_SAFEBAG_sk_type(sk),
ossl_check_PKCS12_SAFEBAG_copyfunc_type(copyfunc),
ossl_check_PKCS12_SAFEBAG_freefunc_type(freefunc)))
#define sk_PKCS12_SAFEBAG_set_cmp_func(sk, cmp)
((sk_PKCS12_SAFEBAG_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_PKCS12_SAFEBAG_sk_type(sk),
ossl_check_PKCS12_SAFEBAG_compfunc_type(cmp)))


typedef struct pkcs12_bag_st PKCS12_BAGS;

# define PKCS12_ERROR    0
# define PKCS12_OK       1

/* Compatibility macros */

#ifndef OPENSSL_NO_DEPRECATED_1_1_0

# define M_PKCS12_bag_type PKCS12_bag_type
# define M_PKCS12_cert_bag_type
 PKCS12_cert_bag_type
# define M_PKCS12_crl_bag_type PKCS12_cert_bag_type
```

```
# define PKCS12_certbag2x509 PKCS12_SAFEBAG_get1_cert
# define PKCS12_certbag2scrl PKCS12_SAFEBAG_get1_crl
# define PKCS12_bag_type PKCS12_SAFEBAG_get_nid
# define PKCS12_cert_bag_type PKCS12_SAFEBAG_get_bag_nid
# define PKCS12_x5092certbag PKCS12_SAFEBAG_create_cert
# define PKCS12_x509crl2certbag PKCS12_SAFEBAG_create_crl
# define PKCS12_MAKE_KEYBAG PKCS12_SAFEBAG_create0_p8inf
# define PKCS12_MAKE_SHKEYBAG PKCS12_SAFEBAG_create_pkcs8_encrypt

#endif
#ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 ASN1_TYPE *PKCS12_get_attr(const PKCS12_SAFEBAG *bag,
                                   int attr_nid);
#endif

ASN1_TYPE *PKCS8_get_attr(PKCS8_PRIV_KEY_INFO *p8, int attr_nid);
int PKCS12_mac_present(const PKCS12 *p12);
void PKCS12_get0_mac(const ASN1_OCTET_STRING **pmac,
             const X509_ALGOR **pmacalg,
             const ASN1_OCTET_STRING **psalt,

     const ASN1_INTEGER **piter,
             const PKCS12 *p12);

const ASN1_TYPE *PKCS12_SAFEBAG_get0_attr(const PKCS12_SAFEBAG *bag,
                               int attr_nid);
const ASN1_OBJECT *PKCS12_SAFEBAG_get0_type(const PKCS12_SAFEBAG *bag);
int PKCS12_SAFEBAG_get_nid(const PKCS12_SAFEBAG *bag);
int PKCS12_SAFEBAG_get_bag_nid(const PKCS12_SAFEBAG *bag);
const ASN1_TYPE *PKCS12_SAFEBAG_get0_bag_obj(const PKCS12_SAFEBAG *bag);
const ASN1_OBJECT *PKCS12_SAFEBAG_get0_bag_type(const PKCS12_SAFEBAG *bag);

X509 *PKCS12_SAFEBAG_get1_cert(const PKCS12_SAFEBAG *bag);
X509_CRL *PKCS12_SAFEBAG_get1_crl(const PKCS12_SAFEBAG *bag);
const STACK_OF(PKCS12_SAFEBAG) *
PKCS12_SAFEBAG_get0_safes(const PKCS12_SAFEBAG *bag);
const PKCS8_PRIV_KEY_INFO *PKCS12_SAFEBAG_get0_p8inf(const PKCS12_SAFEBAG *bag);
const X509_SIG *PKCS12_SAFEBAG_get0_pkcs8(const PKCS12_SAFEBAG *bag);

PKCS12_SAFEBAG *PKCS12_SAFEBAG_create_cert(X509 *x509);
PKCS12_SAFEBAG *PKCS12_SAFEBAG_create_crl(X509_CRL
 *crl);
PKCS12_SAFEBAG *PKCS12_SAFEBAG_create_secret(int type, int vtype, const unsigned char *value, int len);
PKCS12_SAFEBAG *PKCS12_SAFEBAG_create0_p8inf(PKCS8_PRIV_KEY_INFO *p8);
PKCS12_SAFEBAG *PKCS12_SAFEBAG_create0_pkcs8(X509_SIG *p8);
PKCS12_SAFEBAG *PKCS12_SAFEBAG_create_pkcs8_encrypt(int pbe_nid,
                                    const char *pass,
                                    int passlen,
```

```
                                unsigned char *salt,
                                int saltlen, int iter,
                                PKCS8_PRIV_KEY_INFO *p8inf);
PKCS12_SAFEBAG *PKCS12_SAFEBAG_create_pkcs8_encrypt_ex(int pbe_nid,
                                  const char *pass,
                                  int passlen,
                                  unsigned char *salt,

        int saltlen, int iter,
                                  PKCS8_PRIV_KEY_INFO *p8inf,
                                  OSSL_LIB_CTX *ctx,
                                  const char *propq);

PKCS12_SAFEBAG *PKCS12_item_pack_safebag(void *obj, const ASN1_ITEM *it,
                           int nid1, int nid2);
PKCS8_PRIV_KEY_INFO *PKCS8_decrypt(const X509_SIG *p8, const char *pass,
                       int passlen);
PKCS8_PRIV_KEY_INFO *PKCS8_decrypt_ex(const X509_SIG *p8, const char *pass,
                          int passlen, OSSL_LIB_CTX *ctx,
                          const char *propq);
PKCS8_PRIV_KEY_INFO *PKCS12_decrypt_skey(const PKCS12_SAFEBAG *bag,
                             const char *pass, int passlen);
PKCS8_PRIV_KEY_INFO *PKCS12_decrypt_skey_ex(const PKCS12_SAFEBAG *bag,
                                const char *pass,
 int passlen,
                                OSSL_LIB_CTX *ctx,
                                const char *propq);
X509_SIG *PKCS8_encrypt(int pbe_nid, const EVP_CIPHER *cipher,
                const char *pass, int passlen, unsigned char *salt,
                int saltlen, int iter, PKCS8_PRIV_KEY_INFO *p8);
X509_SIG *PKCS8_encrypt_ex(int pbe_nid, const EVP_CIPHER *cipher,
                   const char *pass, int passlen, unsigned char *salt,
                   int saltlen, int iter, PKCS8_PRIV_KEY_INFO *p8,
                   OSSL_LIB_CTX *ctx, const char *propq);
X509_SIG *PKCS8_set0_pbe(const char *pass, int passlen,
                PKCS8_PRIV_KEY_INFO *p8inf, X509_ALGOR *pbe);
X509_SIG *PKCS8_set0_pbe_ex(const char *pass, int passlen,
                    PKCS8_PRIV_KEY_INFO *p8inf, X509_ALGOR *pbe,
                    OSSL_LIB_CTX *ctx, const char *propq);
PKCS7 *PKCS12_pack_p7data(STACK_OF(PKCS12_SAFEBAG)
 *sk);
STACK_OF(PKCS12_SAFEBAG) *PKCS12_unpack_p7data(PKCS7 *p7);
PKCS7 *PKCS12_pack_p7encdata(int pbe_nid, const char *pass, int passlen,
                    unsigned char *salt, int saltlen, int iter,
                    STACK_OF(PKCS12_SAFEBAG) *bags);
PKCS7 *PKCS12_pack_p7encdata_ex(int pbe_nid, const char *pass, int passlen,
                      unsigned char *salt, int saltlen, int iter,
                      STACK_OF(PKCS12_SAFEBAG) *bags,
```

```
                        OSSL_LIB_CTX *ctx, const char *propq);

STACK_OF(PKCS12_SAFEBAG) *PKCS12_unpack_p7encdata(PKCS7 *p7, const char *pass,
                                  int passlen);

int PKCS12_pack_authsafes(PKCS12 *p12, STACK_OF(PKCS7) *safes);
STACK_OF(PKCS7) *PKCS12_unpack_authsafes(const PKCS12 *p12);

int PKCS12_add_localkeyid(PKCS12_SAFEBAG *bag, unsigned char *name,
                          int namelen);
int PKCS12_add_friendlyname_asc(PKCS12_SAFEBAG
 *bag, const char *name,
                           int namelen);
int PKCS12_add_friendlyname_utf8(PKCS12_SAFEBAG *bag, const char *name,
                            int namelen);
int PKCS12_add_CSPName_asc(PKCS12_SAFEBAG *bag, const char *name,
                          int namelen);
int PKCS12_add_friendlyname_uni(PKCS12_SAFEBAG *bag,
                           const unsigned char *name, int namelen);
int PKCS12_add1_attr_by_NID(PKCS12_SAFEBAG *bag, int nid, int type,
                         const unsigned char *bytes, int len);
int PKCS12_add1_attr_by_txt(PKCS12_SAFEBAG *bag, const char *attrname, int type,
                         const unsigned char *bytes, int len);
int PKCS8_add_keyusage(PKCS8_PRIV_KEY_INFO *p8, int usage);
ASN1_TYPE *PKCS12_get_attr_gen(const STACK_OF(X509_ATTRIBUTE) *attrs,
                           int attr_nid);
char *PKCS12_get_friendlyname(PKCS12_SAFEBAG *bag);
const STACK_OF(X509_ATTRIBUTE) *
PKCS12_SAFEBAG_get0_attrs(const
 PKCS12_SAFEBAG *bag);
unsigned char *PKCS12_pbe_crypt(const X509_ALGOR *algor,
                           const char *pass, int passlen,
                           const unsigned char *in, int inlen,
                           unsigned char **data, int *datalen,
                           int en_de);
unsigned char *PKCS12_pbe_crypt_ex(const X509_ALGOR *algor,
                              const char *pass, int passlen,
                              const unsigned char *in, int inlen,
                              unsigned char **data, int *datalen,
                              int en_de, OSSL_LIB_CTX *libctx,
                              const char *propq);
void *PKCS12_item_decrypt_d2i(const X509_ALGOR *algor, const ASN1_ITEM *it,
                          const char *pass, int passlen,
                          const ASN1_OCTET_STRING *oct, int zbuf);
void *PKCS12_item_decrypt_d2i_ex(const X509_ALGOR *algor, const ASN1_ITEM *it,
                             const char *pass, int passlen,
                             const ASN1_OCTET_STRING *oct, int zbuf,
                             OSSL_LIB_CTX *libctx,
```

```
                        const char *propq);
ASN1_OCTET_STRING *PKCS12_item_i2d_encrypt(X509_ALGOR *algor,
                                const ASN1_ITEM *it,
                                const char *pass, int passlen,
                                void *obj, int zbuf);
ASN1_OCTET_STRING *PKCS12_item_i2d_encrypt_ex(X509_ALGOR *algor,
                                  const ASN1_ITEM *it,
                                  const char *pass, int passlen,
                                  void *obj, int zbuf,
                                  OSSL_LIB_CTX *ctx,
                                  const char *propq);
PKCS12 *PKCS12_init(int mode);
PKCS12 *PKCS12_init_ex(int mode, OSSL_LIB_CTX *ctx,
 const char *propq);

int PKCS12_key_gen_asc(const char *pass, int passlen, unsigned char *salt,
                       int saltlen, int id, int iter, int n,
                       unsigned char *out, const EVP_MD *md_type);
int PKCS12_key_gen_asc_ex(const char *pass, int passlen, unsigned char *salt,
                          int saltlen, int id, int iter, int n,
                          unsigned char *out, const EVP_MD *md_type,
                          OSSL_LIB_CTX *ctx, const char *propq);
int PKCS12_key_gen_uni(unsigned char *pass, int passlen, unsigned char *salt,
                       int saltlen, int id, int iter, int n,
                       unsigned char *out, const EVP_MD *md_type);
int PKCS12_key_gen_uni_ex(unsigned char *pass, int passlen, unsigned char *salt,
                          int saltlen, int id, int iter, int n,
                          unsigned char *out, const EVP_MD *md_type,
                          OSSL_LIB_CTX *ctx, const char *propq);
int PKCS12_key_gen_utf8(const
 char *pass, int passlen, unsigned char *salt,
                        int saltlen, int id, int iter, int n,
                        unsigned char *out, const EVP_MD *md_type);
int PKCS12_key_gen_utf8_ex(const char *pass, int passlen, unsigned char *salt,
                           int saltlen, int id, int iter, int n,
                           unsigned char *out, const EVP_MD *md_type,
                           OSSL_LIB_CTX *ctx, const char *propq);

int PKCS12_PBE_keyivgen(EVP_CIPHER_CTX *ctx, const char *pass, int passlen,
                        ASN1_TYPE *param, const EVP_CIPHER *cipher,
                        const EVP_MD *md_type, int en_de);
int PKCS12_PBE_keyivgen_ex(EVP_CIPHER_CTX *ctx, const char *pass, int passlen,
                           ASN1_TYPE *param, const EVP_CIPHER *cipher,
                           const EVP_MD *md_type, int en_de,
                           OSSL_LIB_CTX *libctx, const char *propq);
int PKCS12_gen_mac(PKCS12 *p12, const char
 *pass, int passlen,
                   unsigned char *mac, unsigned int *maclen);
```

```
int PKCS12_verify_mac(PKCS12 *p12, const char *pass, int passlen);
int PKCS12_set_mac(PKCS12 *p12, const char *pass, int passlen,
                   unsigned char *salt, int saltlen, int iter,
                   const EVP_MD *md_type);
int PKCS12_setup_mac(PKCS12 *p12, int iter, unsigned char *salt,
                     int saltlen, const EVP_MD *md_type);
unsigned char *OPENSSL_asc2uni(const char *asc, int asclen,
                               unsigned char **uni, int *unilen);
char *OPENSSL_uni2asc(const unsigned char *uni, int unilen);
unsigned char *OPENSSL_utf82uni(const char *asc, int asclen,
                                unsigned char **uni, int *unilen);
char *OPENSSL_uni2utf8(const unsigned char *uni, int unilen);

DECLARE_ASN1_FUNCTIONS(PKCS12)
DECLARE_ASN1_FUNCTIONS(PKCS12_MAC_DATA)
DECLARE_ASN1_FUNCTIONS(PKCS12_SAFEBAG)
DECLARE_ASN1_FUNCTIONS(PKCS12_BAGS)

DECLARE_ASN1_ITEM(PKCS12_SAFEBAGS)
DECLARE_ASN1_ITEM(PKCS12_AUTHSAFES)

void
 PKCS12_PBE_add(void);
int PKCS12_parse(PKCS12 *p12, const char *pass, EVP_PKEY **pkey, X509 **cert,
                 STACK_OF(X509) **ca);
PKCS12 *PKCS12_create(const char *pass, const char *name, EVP_PKEY *pkey,
                      X509 *cert, STACK_OF(X509) *ca, int nid_key, int nid_cert,
                      int iter, int mac_iter, int keytype);
PKCS12 *PKCS12_create_ex(const char *pass, const char *name, EVP_PKEY *pkey,
                         X509 *cert, STACK_OF(X509) *ca, int nid_key, int nid_cert,
                         int iter, int mac_iter, int keytype,
                         OSSL_LIB_CTX *ctx, const char *propq);

PKCS12_SAFEBAG *PKCS12_add_cert(STACK_OF(PKCS12_SAFEBAG) **pbags, X509 *cert);
PKCS12_SAFEBAG *PKCS12_add_key(STACK_OF(PKCS12_SAFEBAG) **pbags,
                               EVP_PKEY *key, int key_usage, int iter,
                               int key_nid, const char *pass);
PKCS12_SAFEBAG *PKCS12_add_key_ex(STACK_OF(PKCS12_SAFEBAG)
 **pbags,
                                  EVP_PKEY *key, int key_usage, int iter,
                                  int key_nid, const char *pass,
                                  OSSL_LIB_CTX *ctx, const char *propq);

PKCS12_SAFEBAG *PKCS12_add_secret(STACK_OF(PKCS12_SAFEBAG) **pbags,
                                  int nid_type, const unsigned char *value, int len);
int PKCS12_add_safe(STACK_OF(PKCS7) **psafes, STACK_OF(PKCS12_SAFEBAG) *bags,
                    int safe_nid, int iter, const char *pass);
int PKCS12_add_safe_ex(STACK_OF(PKCS7) **psafes, STACK_OF(PKCS12_SAFEBAG) *bags,
```

```
                int safe_nid, int iter, const char *pass,
                OSSL_LIB_CTX *ctx, const char *propq);

PKCS12 *PKCS12_add_safes(STACK_OF(PKCS7) *safes, int p7_nid);
PKCS12 *PKCS12_add_safes_ex(STACK_OF(PKCS7) *safes, int p7_nid,
                    OSSL_LIB_CTX *ctx, const char *propq);

int i2d_PKCS12_bio(BIO *bp, const PKCS12 *p12);
# ifndef
 OPENSSL_NO_STDIO
int i2d_PKCS12_fp(FILE *fp, const PKCS12 *p12);
# endif
PKCS12 *d2i_PKCS12_bio(BIO *bp, PKCS12 **p12);
# ifndef OPENSSL_NO_STDIO
PKCS12 *d2i_PKCS12_fp(FILE *fp, PKCS12 **p12);
# endif
int PKCS12_newpass(PKCS12 *p12, const char *oldpass, const char *newpass);

# ifdef  __cplusplus
}
# endif
#endif
<!-- This file is automatically added by @npmcli/template-oss. Do not edit. -->

ISC License

Copyright npm, Inc.

Permission to use, copy, modify, and/or distribute this
software for any purpose with or without fee is hereby
granted, provided that the above copyright notice and this
permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND NPM DISCLAIMS ALL
WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO
EVENT SHALL NPM BE LIABLE FOR ANY SPECIAL, DIRECT,
INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS,
WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE
USE OR PERFORMANCE OF THIS SOFTWARE.
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/ocsp.h.in
*
* Copyright 2000-2021 The OpenSSL Project Authors. All Rights Reserved.
*
```

```
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_OCSP_H
# define OPENSSL_OCSP_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_OCSP_H
# endif

# include <openssl/opensslconf.h>
# include <openssl/http.h>
# include <openssl/asn1.h>

/*
* These definitions are outside the OPENSSL_NO_OCSP guard because although for
* historical reasons they have OCSP_* names, they can actually be used
* independently of OCSP. E.g. see RFC5280
*/
/*-
*   CRLReason ::= ENUMERATED {
*       unspecified             (0),
*       keyCompromise           (1),
*       cACompromise
          (2),
*       affiliationChanged      (3),
*       superseded              (4),
*       cessationOfOperation    (5),
*       certificateHold         (6),
*       -- value 7 is not used
*       removeFromCRL           (8),
*       privilegeWithdrawn      (9),
*       aACompromise            (10) }
*/
# define OCSP_REVOKED_STATUS_NOSTATUS               -1
# define OCSP_REVOKED_STATUS_UNSPECIFIED            0
# define OCSP_REVOKED_STATUS_KEYCOMPROMISE          1
# define OCSP_REVOKED_STATUS_CACOMPROMISE           2
# define OCSP_REVOKED_STATUS_AFFILIATIONCHANGED     3
# define OCSP_REVOKED_STATUS_SUPERSEDED             4
# define OCSP_REVOKED_STATUS_CESSATIONOFOPERATION   5
```

```
# define OCSP_REVOKED_STATUS_CERTIFICATEHOLD        6
# define OCSP_REVOKED_STATUS_REMOVEFROMCRL          8
# define OCSP_REVOKED_STATUS_PRIVILEGEWITHDRAWN     9
# define OCSP_REVOKED_STATUS_AACOMPROMISE           10


# ifndef OPENSSL_NO_OCSP

#  include <openssl/x509.h>
#
 include <openssl/x509v3.h>
#  include <openssl/safestack.h>
#  include <openssl/ocsperr.h>

#  ifdef __cplusplus
extern "C" {
#  endif

/* Various flags and values */

#  define OCSP_DEFAULT_NONCE_LENGTH       16

#  define OCSP_NOCERTS                0x1
#  define OCSP_NOINTERN               0x2
#  define OCSP_NOSIGS                 0x4
#  define OCSP_NOCHAIN                0x8
#  define OCSP_NOVERIFY               0x10
#  define OCSP_NOEXPLICIT             0x20
#  define OCSP_NOCASIGN               0x40
#  define OCSP_NODELEGATED            0x80
#  define OCSP_NOCHECKS               0x100
#  define OCSP_TRUSTOTHER             0x200
#  define OCSP_RESPID_KEY             0x400
#  define OCSP_NOTIME                 0x800
#  define OCSP_PARTIAL_CHAIN          0x1000

typedef struct ocsp_cert_id_st OCSP_CERTID;
typedef struct ocsp_one_request_st OCSP_ONEREQ;
typedef struct ocsp_req_info_st OCSP_REQINFO;
typedef struct ocsp_signature_st
 OCSP_SIGNATURE;
typedef struct ocsp_request_st OCSP_REQUEST;

SKM_DEFINE_STACK_OF_INTERNAL(OCSP_CERTID, OCSP_CERTID, OCSP_CERTID)
#define sk_OCSP_CERTID_num(sk) OPENSSL_sk_num(ossl_check_const_OCSP_CERTID_sk_type(sk))
#define sk_OCSP_CERTID_value(sk, idx) ((OCSP_CERTID
*)OPENSSL_sk_value(ossl_check_const_OCSP_CERTID_sk_type(sk), (idx)))
#define sk_OCSP_CERTID_new(cmp) ((STACK_OF(OCSP_CERTID)
```

*)OPENSSL_sk_new(ossl_check_OCSP_CERTID_compfunc_type(cmp)))
#define sk_OCSP_CERTID_new_null() ((STACK_OF(OCSP_CERTID) *)OPENSSL_sk_new_null())
#define sk_OCSP_CERTID_new_reserve(cmp, n) ((STACK_OF(OCSP_CERTID)
*)OPENSSL_sk_new_reserve(ossl_check_OCSP_CERTID_compfunc_type(cmp), (n)))
#define sk_OCSP_CERTID_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_OCSP_CERTID_sk_type(sk), (n))
#define sk_OCSP_CERTID_free(sk) OPENSSL_sk_free(ossl_check_OCSP_CERTID_sk_type(sk))
#define sk_OCSP_CERTID_zero(sk) OPENSSL_sk_zero(ossl_check_OCSP_CERTID_sk_type(sk))
#define sk_OCSP_CERTID_delete(sk, i) ((OCSP_CERTID
*)OPENSSL_sk_delete(ossl_check_OCSP_CERTID_sk_type(sk),
(i)))
#define sk_OCSP_CERTID_delete_ptr(sk, ptr) ((OCSP_CERTID
*)OPENSSL_sk_delete_ptr(ossl_check_OCSP_CERTID_sk_type(sk), ossl_check_OCSP_CERTID_type(ptr)))
#define sk_OCSP_CERTID_push(sk, ptr) OPENSSL_sk_push(ossl_check_OCSP_CERTID_sk_type(sk),
ossl_check_OCSP_CERTID_type(ptr))
#define sk_OCSP_CERTID_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_OCSP_CERTID_sk_type(sk),
ossl_check_OCSP_CERTID_type(ptr))
#define sk_OCSP_CERTID_pop(sk) ((OCSP_CERTID
*)OPENSSL_sk_pop(ossl_check_OCSP_CERTID_sk_type(sk)))
#define sk_OCSP_CERTID_shift(sk) ((OCSP_CERTID
*)OPENSSL_sk_shift(ossl_check_OCSP_CERTID_sk_type(sk)))
#define sk_OCSP_CERTID_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OCSP_CERTID_sk_type(sk),ossl_check_OCSP_CERTID_freefunc_type(freef
unc))
#define sk_OCSP_CERTID_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_OCSP_CERTID_sk_type(sk),
ossl_check_OCSP_CERTID_type(ptr), (idx))
#define sk_OCSP_CERTID_set(sk, idx, ptr) ((OCSP_CERTID
*)OPENSSL_sk_set(ossl_check_OCSP_CERTID_sk_type(sk), (idx), ossl_check_OCSP_CERTID_type(ptr)))
#define sk_OCSP_CERTID_find(sk, ptr) OPENSSL_sk_find(ossl_check_OCSP_CERTID_sk_type(sk),
ossl_check_OCSP_CERTID_type(ptr))
#define sk_OCSP_CERTID_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_OCSP_CERTID_sk_type(sk),
ossl_check_OCSP_CERTID_type(ptr))
#define sk_OCSP_CERTID_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OCSP_CERTID_sk_type(sk), ossl_check_OCSP_CERTID_type(ptr), pnum)
#define sk_OCSP_CERTID_sort(sk) OPENSSL_sk_sort(ossl_check_OCSP_CERTID_sk_type(sk))
#define sk_OCSP_CERTID_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OCSP_CERTID_sk_type(sk))
#define sk_OCSP_CERTID_dup(sk) ((STACK_OF(OCSP_CERTID)
*)OPENSSL_sk_dup(ossl_check_const_OCSP_CERTID_sk_type(sk)))
#define sk_OCSP_CERTID_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OCSP_CERTID)
*)OPENSSL_sk_deep_copy(ossl_check_const_OCSP_CERTID_sk_type(sk),
ossl_check_OCSP_CERTID_copyfunc_type(copyfunc), ossl_check_OCSP_CERTID_freefunc_type(freefunc)))
#define
sk_OCSP_CERTID_set_cmp_func(sk, cmp)
((sk_OCSP_CERTID_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OCSP_CERTID_sk_type(sk),
ossl_check_OCSP_CERTID_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(OCSP_ONEREQ, OCSP_ONEREQ, OCSP_ONEREQ)
#define sk_OCSP_ONEREQ_num(sk) OPENSSL_sk_num(ossl_check_const_OCSP_ONEREQ_sk_type(sk))
#define sk_OCSP_ONEREQ_value(sk, idx) ((OCSP_ONEREQ

*)OPENSSL_sk_value(ossl_check_const_OCSP_ONEREQ_sk_type(sk), (idx)))
#define sk_OCSP_ONEREQ_new(cmp) ((STACK_OF(OCSP_ONEREQ)
*)OPENSSL_sk_new(ossl_check_OCSP_ONEREQ_compfunc_type(cmp)))
#define sk_OCSP_ONEREQ_new_null() ((STACK_OF(OCSP_ONEREQ) *)OPENSSL_sk_new_null())
#define sk_OCSP_ONEREQ_new_reserve(cmp, n) ((STACK_OF(OCSP_ONEREQ)
*)OPENSSL_sk_new_reserve(ossl_check_OCSP_ONEREQ_compfunc_type(cmp), (n)))
#define sk_OCSP_ONEREQ_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_OCSP_ONEREQ_sk_type(sk), (n))
#define sk_OCSP_ONEREQ_free(sk) OPENSSL_sk_free(ossl_check_OCSP_ONEREQ_sk_type(sk))
#define
sk_OCSP_ONEREQ_zero(sk) OPENSSL_sk_zero(ossl_check_OCSP_ONEREQ_sk_type(sk))
#define sk_OCSP_ONEREQ_delete(sk, i) ((OCSP_ONEREQ
*)OPENSSL_sk_delete(ossl_check_OCSP_ONEREQ_sk_type(sk), (i)))
#define sk_OCSP_ONEREQ_delete_ptr(sk, ptr) ((OCSP_ONEREQ
*)OPENSSL_sk_delete_ptr(ossl_check_OCSP_ONEREQ_sk_type(sk), ossl_check_OCSP_ONEREQ_type(ptr)))
#define sk_OCSP_ONEREQ_push(sk, ptr) OPENSSL_sk_push(ossl_check_OCSP_ONEREQ_sk_type(sk),
ossl_check_OCSP_ONEREQ_type(ptr))
#define sk_OCSP_ONEREQ_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_OCSP_ONEREQ_sk_type(sk),
ossl_check_OCSP_ONEREQ_type(ptr))
#define sk_OCSP_ONEREQ_pop(sk) ((OCSP_ONEREQ
*)OPENSSL_sk_pop(ossl_check_OCSP_ONEREQ_sk_type(sk)))
#define sk_OCSP_ONEREQ_shift(sk) ((OCSP_ONEREQ
*)OPENSSL_sk_shift(ossl_check_OCSP_ONEREQ_sk_type(sk)))
#define sk_OCSP_ONEREQ_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OCSP_ONEREQ_sk_type(sk),ossl_check_OCSP_ONEREQ_freefunc_type(fr
eefunc))
#define sk_OCSP_ONEREQ_insert(sk,
ptr, idx) OPENSSL_sk_insert(ossl_check_OCSP_ONEREQ_sk_type(sk), ossl_check_OCSP_ONEREQ_type(ptr),
(idx))
#define sk_OCSP_ONEREQ_set(sk, idx, ptr) ((OCSP_ONEREQ
*)OPENSSL_sk_set(ossl_check_OCSP_ONEREQ_sk_type(sk), (idx), ossl_check_OCSP_ONEREQ_type(ptr)))
#define sk_OCSP_ONEREQ_find(sk, ptr) OPENSSL_sk_find(ossl_check_OCSP_ONEREQ_sk_type(sk),
ossl_check_OCSP_ONEREQ_type(ptr))
#define sk_OCSP_ONEREQ_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_OCSP_ONEREQ_sk_type(sk),
ossl_check_OCSP_ONEREQ_type(ptr))
#define sk_OCSP_ONEREQ_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OCSP_ONEREQ_sk_type(sk), ossl_check_OCSP_ONEREQ_type(ptr), pnum)
#define sk_OCSP_ONEREQ_sort(sk) OPENSSL_sk_sort(ossl_check_OCSP_ONEREQ_sk_type(sk))
#define sk_OCSP_ONEREQ_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OCSP_ONEREQ_sk_type(sk))
#define sk_OCSP_ONEREQ_dup(sk) ((STACK_OF(OCSP_ONEREQ)
*)OPENSSL_sk_dup(ossl_check_const_OCSP_ONEREQ_sk_type(sk)))
#define sk_OCSP_ONEREQ_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(OCSP_ONEREQ) *)OPENSSL_sk_deep_copy(ossl_check_const_OCSP_ONEREQ_sk_type(sk),
ossl_check_OCSP_ONEREQ_copyfunc_type(copyfunc), ossl_check_OCSP_ONEREQ_freefunc_type(freefunc)))
#define sk_OCSP_ONEREQ_set_cmp_func(sk, cmp)
((sk_OCSP_ONEREQ_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OCSP_ONEREQ_sk_type(sk),
ossl_check_OCSP_ONEREQ_compfunc_type(cmp)))

```
# define OCSP_RESPONSE_STATUS_SUCCESSFUL          0
# define OCSP_RESPONSE_STATUS_MALFORMEDREQUEST    1
# define OCSP_RESPONSE_STATUS_INTERNALERROR       2
# define OCSP_RESPONSE_STATUS_TRYLATER            3
# define OCSP_RESPONSE_STATUS_SIGREQUIRED         5
# define OCSP_RESPONSE_STATUS_UNAUTHORIZED        6

typedef struct ocsp_resp_bytes_st OCSP_RESPBYTES;

# define V_OCSP_RESPID_NAME 0
# define V_OCSP_RESPID_KEY  1

SKM_DEFINE_STACK_OF_INTERNAL(OCSP_RESPID, OCSP_RESPID, OCSP_RESPID)
#define sk_OCSP_RESPID_num(sk) OPENSSL_sk_num(ossl_check_const_OCSP_RESPID_sk_type(sk))
#define sk_OCSP_RESPID_value(sk, idx)
 ((OCSP_RESPID *)OPENSSL_sk_value(ossl_check_const_OCSP_RESPID_sk_type(sk), (idx)))
#define sk_OCSP_RESPID_new(cmp) ((STACK_OF(OCSP_RESPID)
*)OPENSSL_sk_new(ossl_check_OCSP_RESPID_compfunc_type(cmp)))
#define sk_OCSP_RESPID_new_null() ((STACK_OF(OCSP_RESPID) *)OPENSSL_sk_new_null())
#define sk_OCSP_RESPID_new_reserve(cmp, n) ((STACK_OF(OCSP_RESPID)
*)OPENSSL_sk_new_reserve(ossl_check_OCSP_RESPID_compfunc_type(cmp), (n)))
#define sk_OCSP_RESPID_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_OCSP_RESPID_sk_type(sk), (n))
#define sk_OCSP_RESPID_free(sk) OPENSSL_sk_free(ossl_check_OCSP_RESPID_sk_type(sk))
#define sk_OCSP_RESPID_zero(sk) OPENSSL_sk_zero(ossl_check_OCSP_RESPID_sk_type(sk))
#define sk_OCSP_RESPID_delete(sk, i) ((OCSP_RESPID
*)OPENSSL_sk_delete(ossl_check_OCSP_RESPID_sk_type(sk), (i)))
#define sk_OCSP_RESPID_delete_ptr(sk, ptr) ((OCSP_RESPID
*)OPENSSL_sk_delete_ptr(ossl_check_OCSP_RESPID_sk_type(sk), ossl_check_OCSP_RESPID_type(ptr)))
#define sk_OCSP_RESPID_push(sk, ptr) OPENSSL_sk_push(ossl_check_OCSP_RESPID_sk_type(sk),
 ossl_check_OCSP_RESPID_type(ptr))
#define sk_OCSP_RESPID_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_OCSP_RESPID_sk_type(sk),
ossl_check_OCSP_RESPID_type(ptr))
#define sk_OCSP_RESPID_pop(sk) ((OCSP_RESPID
*)OPENSSL_sk_pop(ossl_check_OCSP_RESPID_sk_type(sk)))
#define sk_OCSP_RESPID_shift(sk) ((OCSP_RESPID
*)OPENSSL_sk_shift(ossl_check_OCSP_RESPID_sk_type(sk)))
#define sk_OCSP_RESPID_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OCSP_RESPID_sk_type(sk),ossl_check_OCSP_RESPID_freefunc_type(freef
unc))
#define sk_OCSP_RESPID_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_OCSP_RESPID_sk_type(sk),
ossl_check_OCSP_RESPID_type(ptr), (idx))
#define sk_OCSP_RESPID_set(sk, idx, ptr) ((OCSP_RESPID
*)OPENSSL_sk_set(ossl_check_OCSP_RESPID_sk_type(sk), (idx), ossl_check_OCSP_RESPID_type(ptr)))
#define sk_OCSP_RESPID_find(sk, ptr) OPENSSL_sk_find(ossl_check_OCSP_RESPID_sk_type(sk),
ossl_check_OCSP_RESPID_type(ptr))
#define sk_OCSP_RESPID_find_ex(sk,
```

```
 ptr) OPENSSL_sk_find_ex(ossl_check_OCSP_RESPID_sk_type(sk), ossl_check_OCSP_RESPID_type(ptr))
#define sk_OCSP_RESPID_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OCSP_RESPID_sk_type(sk), ossl_check_OCSP_RESPID_type(ptr), pnum)
#define sk_OCSP_RESPID_sort(sk) OPENSSL_sk_sort(ossl_check_OCSP_RESPID_sk_type(sk))
#define sk_OCSP_RESPID_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_OCSP_RESPID_sk_type(sk))
#define sk_OCSP_RESPID_dup(sk) ((STACK_OF(OCSP_RESPID)
*)OPENSSL_sk_dup(ossl_check_const_OCSP_RESPID_sk_type(sk)))
#define sk_OCSP_RESPID_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OCSP_RESPID)
*)OPENSSL_sk_deep_copy(ossl_check_const_OCSP_RESPID_sk_type(sk),
ossl_check_OCSP_RESPID_copyfunc_type(copyfunc), ossl_check_OCSP_RESPID_freefunc_type(freefunc)))
#define sk_OCSP_RESPID_set_cmp_func(sk, cmp)
((sk_OCSP_RESPID_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OCSP_RESPID_sk_type(sk),
ossl_check_OCSP_RESPID_compfunc_type(cmp)))


typedef struct ocsp_revoked_info_st
 OCSP_REVOKEDINFO;

#  define V_OCSP_CERTSTATUS_GOOD    0
#  define V_OCSP_CERTSTATUS_REVOKED 1
#  define V_OCSP_CERTSTATUS_UNKNOWN 2

typedef struct ocsp_cert_status_st OCSP_CERTSTATUS;
typedef struct ocsp_single_response_st OCSP_SINGLERESP;

SKM_DEFINE_STACK_OF_INTERNAL(OCSP_SINGLERESP, OCSP_SINGLERESP, OCSP_SINGLERESP)
#define sk_OCSP_SINGLERESP_num(sk)
OPENSSL_sk_num(ossl_check_const_OCSP_SINGLERESP_sk_type(sk))
#define sk_OCSP_SINGLERESP_value(sk, idx) ((OCSP_SINGLERESP
*)OPENSSL_sk_value(ossl_check_const_OCSP_SINGLERESP_sk_type(sk), (idx)))
#define sk_OCSP_SINGLERESP_new(cmp) ((STACK_OF(OCSP_SINGLERESP)
*)OPENSSL_sk_new(ossl_check_OCSP_SINGLERESP_compfunc_type(cmp)))
#define sk_OCSP_SINGLERESP_new_null() ((STACK_OF(OCSP_SINGLERESP) *)OPENSSL_sk_new_null())
#define sk_OCSP_SINGLERESP_new_reserve(cmp, n) ((STACK_OF(OCSP_SINGLERESP)
*)OPENSSL_sk_new_reserve(ossl_check_OCSP_SINGLERESP_compfunc_type(cmp), (n)))
#define sk_OCSP_SINGLERESP_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OCSP_SINGLERESP_sk_type(sk),
 (n))
#define sk_OCSP_SINGLERESP_free(sk) OPENSSL_sk_free(ossl_check_OCSP_SINGLERESP_sk_type(sk))
#define sk_OCSP_SINGLERESP_zero(sk) OPENSSL_sk_zero(ossl_check_OCSP_SINGLERESP_sk_type(sk))
#define sk_OCSP_SINGLERESP_delete(sk, i) ((OCSP_SINGLERESP
*)OPENSSL_sk_delete(ossl_check_OCSP_SINGLERESP_sk_type(sk), (i)))
#define sk_OCSP_SINGLERESP_delete_ptr(sk, ptr) ((OCSP_SINGLERESP
*)OPENSSL_sk_delete_ptr(ossl_check_OCSP_SINGLERESP_sk_type(sk),
ossl_check_OCSP_SINGLERESP_type(ptr)))
#define sk_OCSP_SINGLERESP_push(sk, ptr)
OPENSSL_sk_push(ossl_check_OCSP_SINGLERESP_sk_type(sk), ossl_check_OCSP_SINGLERESP_type(ptr))
#define sk_OCSP_SINGLERESP_unshift(sk, ptr)
```

```
OPENSSL_sk_unshift(ossl_check_OCSP_SINGLERESP_sk_type(sk),
ossl_check_OCSP_SINGLERESP_type(ptr))
#define sk_OCSP_SINGLERESP_pop(sk) ((OCSP_SINGLERESP
*)OPENSSL_sk_pop(ossl_check_OCSP_SINGLERESP_sk_type(sk)))
#define sk_OCSP_SINGLERESP_shift(sk) ((OCSP_SINGLERESP
*)OPENSSL_sk_shift(ossl_check_OCSP_SINGLERESP_sk_type(sk)))
#define
 sk_OCSP_SINGLERESP_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OCSP_SINGLERESP_sk_type(sk),ossl_check_OCSP_SINGLERESP_freefun
c_type(freefunc))
#define sk_OCSP_SINGLERESP_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OCSP_SINGLERESP_sk_type(sk), ossl_check_OCSP_SINGLERESP_type(ptr),
(idx))
#define sk_OCSP_SINGLERESP_set(sk, idx, ptr) ((OCSP_SINGLERESP
*)OPENSSL_sk_set(ossl_check_OCSP_SINGLERESP_sk_type(sk), (idx),
ossl_check_OCSP_SINGLERESP_type(ptr)))
#define sk_OCSP_SINGLERESP_find(sk, ptr) OPENSSL_sk_find(ossl_check_OCSP_SINGLERESP_sk_type(sk),
ossl_check_OCSP_SINGLERESP_type(ptr))
#define sk_OCSP_SINGLERESP_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OCSP_SINGLERESP_sk_type(sk),
ossl_check_OCSP_SINGLERESP_type(ptr))
#define sk_OCSP_SINGLERESP_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OCSP_SINGLERESP_sk_type(sk),
ossl_check_OCSP_SINGLERESP_type(ptr), pnum)
#define sk_OCSP_SINGLERESP_sort(sk) OPENSSL_sk_sort(ossl_check_OCSP_SINGLERESP_sk_type(sk))
#define
 sk_OCSP_SINGLERESP_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OCSP_SINGLERESP_sk_type(sk))
#define sk_OCSP_SINGLERESP_dup(sk) ((STACK_OF(OCSP_SINGLERESP)
*)OPENSSL_sk_dup(ossl_check_const_OCSP_SINGLERESP_sk_type(sk)))
#define sk_OCSP_SINGLERESP_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OCSP_SINGLERESP)
*)OPENSSL_sk_deep_copy(ossl_check_const_OCSP_SINGLERESP_sk_type(sk),
ossl_check_OCSP_SINGLERESP_copyfunc_type(copyfunc),
ossl_check_OCSP_SINGLERESP_freefunc_type(freefunc)))
#define sk_OCSP_SINGLERESP_set_cmp_func(sk, cmp)
((sk_OCSP_SINGLERESP_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OCSP_SINGLERESP_sk_type(sk
), ossl_check_OCSP_SINGLERESP_compfunc_type(cmp)))


typedef struct ocsp_response_data_st OCSP_RESPDATA;

typedef struct ocsp_basic_response_st OCSP_BASICRESP;

typedef struct ocsp_crl_id_st OCSP_CRLID;
typedef struct ocsp_service_locator_st OCSP_SERVICELOC;

#  define PEM_STRING_OCSP_REQUEST "OCSP REQUEST"
#  define PEM_STRING_OCSP_RESPONSE "OCSP
```

```
 RESPONSE"

# define d2i_OCSP_REQUEST_bio(bp,p)
ASN1_d2i_bio_of(OCSP_REQUEST,OCSP_REQUEST_new,d2i_OCSP_REQUEST,bp,p)

# define d2i_OCSP_RESPONSE_bio(bp,p)
ASN1_d2i_bio_of(OCSP_RESPONSE,OCSP_RESPONSE_new,d2i_OCSP_RESPONSE,bp,p)

# define PEM_read_bio_OCSP_REQUEST(bp,x,cb) (OCSP_REQUEST *)PEM_ASN1_read_bio( \
   (char *(*)())d2i_OCSP_REQUEST,PEM_STRING_OCSP_REQUEST, \
   bp,(char **)(x),cb,NULL)

# define PEM_read_bio_OCSP_RESPONSE(bp,x,cb) (OCSP_RESPONSE *)PEM_ASN1_read_bio(\
   (char *(*)())d2i_OCSP_RESPONSE,PEM_STRING_OCSP_RESPONSE, \
   bp,(char **)(x),cb,NULL)

# define PEM_write_bio_OCSP_REQUEST(bp,o) \
  PEM_ASN1_write_bio((int (*)())i2d_OCSP_REQUEST,PEM_STRING_OCSP_REQUEST,\
                bp,(char *)(o), NULL,NULL,0,NULL,NULL)

# define PEM_write_bio_OCSP_RESPONSE(bp,o) \
  PEM_ASN1_write_bio((int (*)())i2d_OCSP_RESPONSE,PEM_STRING_OCSP_RESPONSE,\
                bp,(char *)(o), NULL,NULL,0,NULL,NULL)

# define i2d_OCSP_RESPONSE_bio(bp,o) ASN1_i2d_bio_of(OCSP_RESPONSE,i2d_OCSP_RESPONSE,bp,o)

#
 define i2d_OCSP_REQUEST_bio(bp,o) ASN1_i2d_bio_of(OCSP_REQUEST,i2d_OCSP_REQUEST,bp,o)

# define ASN1_BIT_STRING_digest(data,type,md,len) \
     ASN1_item_digest(ASN1_ITEM_rptr(ASN1_BIT_STRING),type,data,md,len)

# define OCSP_CERTSTATUS_dup(cs)\
           (OCSP_CERTSTATUS*)ASN1_dup((i2d_of_void *)i2d_OCSP_CERTSTATUS,\
           (d2i_of_void *)d2i_OCSP_CERTSTATUS,(char *)(cs))

DECLARE_ASN1_DUP_FUNCTION(OCSP_CERTID)

OSSL_HTTP_REQ_CTX *OCSP_sendreq_new(BIO *io, const char *path,
                        const OCSP_REQUEST *req, int buf_size);
OCSP_RESPONSE *OCSP_sendreq_bio(BIO *b, const char *path, OCSP_REQUEST *req);

# ifndef OPENSSL_NO_DEPRECATED_3_0
typedef OSSL_HTTP_REQ_CTX OCSP_REQ_CTX;
#  define OCSP_REQ_CTX_new(io, buf_size) \
     OSSL_HTTP_REQ_CTX_new(io, io, buf_size)
#  define OCSP_REQ_CTX_free OSSL_HTTP_REQ_CTX_free
#  define OCSP_REQ_CTX_http(rctx, op, path) \
```

```
     (OSSL_HTTP_REQ_CTX_set_expected(rctx,
 NULL, 1 /* asn1 */, 0, 0) && \
      OSSL_HTTP_REQ_CTX_set_request_line(rctx, strcmp(op, "POST") == 0, \
                                NULL, NULL, path))
#   define OCSP_REQ_CTX_add1_header OSSL_HTTP_REQ_CTX_add1_header
#   define OCSP_REQ_CTX_i2d(r, it, req) \
     OSSL_HTTP_REQ_CTX_set1_req(r, "application/ocsp-request", it, req)
#   define OCSP_REQ_CTX_set1_req(r, req) \
     OCSP_REQ_CTX_i2d(r, ASN1_ITEM_rptr(OCSP_REQUEST), (ASN1_VALUE *)(req))
#   define OCSP_REQ_CTX_nbio OSSL_HTTP_REQ_CTX_nbio
#   define OCSP_REQ_CTX_nbio_d2i OSSL_HTTP_REQ_CTX_nbio_d2i
#   define OCSP_sendreq_nbio(p, r) \
     OSSL_HTTP_REQ_CTX_nbio_d2i(r, (ASN1_VALUE **)(p), \
                        ASN1_ITEM_rptr(OCSP_RESPONSE))
#   define OCSP_REQ_CTX_get0_mem_bio OSSL_HTTP_REQ_CTX_get0_mem_bio
#   define OCSP_set_max_response_length OSSL_HTTP_REQ_CTX_set_max_response_length
#  endif

OCSP_CERTID *OCSP_cert_to_id(const EVP_MD *dgst, const X509 *subject,
                     const X509 *issuer);

OCSP_CERTID *OCSP_cert_id_new(const EVP_MD *dgst,
                     const X509_NAME *issuerName,
                     const ASN1_BIT_STRING *issuerKey,
                     const ASN1_INTEGER *serialNumber);

OCSP_ONEREQ *OCSP_request_add0_id(OCSP_REQUEST *req, OCSP_CERTID *cid);

int OCSP_request_add1_nonce(OCSP_REQUEST *req, unsigned char *val, int len);
int OCSP_basic_add1_nonce(OCSP_BASICRESP *resp, unsigned char *val, int len);
int OCSP_check_nonce(OCSP_REQUEST *req, OCSP_BASICRESP *bs);
int OCSP_copy_nonce(OCSP_BASICRESP *resp, OCSP_REQUEST *req);

int OCSP_request_set1_name(OCSP_REQUEST *req, const X509_NAME *nm);
int OCSP_request_add1_cert(OCSP_REQUEST *req, X509 *cert);

int OCSP_request_sign(OCSP_REQUEST *req,
                 X509 *signer,
                 EVP_PKEY *key,
                 const EVP_MD *dgst,
                 STACK_OF(X509) *certs, unsigned long flags);

int
 OCSP_response_status(OCSP_RESPONSE *resp);
OCSP_BASICRESP *OCSP_response_get1_basic(OCSP_RESPONSE *resp);

const ASN1_OCTET_STRING *OCSP_resp_get0_signature(const OCSP_BASICRESP *bs);
const X509_ALGOR *OCSP_resp_get0_tbs_sigalg(const OCSP_BASICRESP *bs);
```

```
const OCSP_RESPDATA *OCSP_resp_get0_respdata(const OCSP_BASICRESP *bs);
int OCSP_resp_get0_signer(OCSP_BASICRESP *bs, X509 **signer,
                          STACK_OF(X509) *extra_certs);

int OCSP_resp_count(OCSP_BASICRESP *bs);
OCSP_SINGLERESP *OCSP_resp_get0(OCSP_BASICRESP *bs, int idx);
const ASN1_GENERALIZEDTIME *OCSP_resp_get0_produced_at(const OCSP_BASICRESP* bs);
const STACK_OF(X509) *OCSP_resp_get0_certs(const OCSP_BASICRESP *bs);
int OCSP_resp_get0_id(const OCSP_BASICRESP *bs,
                      const ASN1_OCTET_STRING **pid,
                      const X509_NAME **pname);
int OCSP_resp_get1_id(const OCSP_BASICRESP *bs,
                      ASN1_OCTET_STRING **pid,
                      X509_NAME **pname);

int OCSP_resp_find(OCSP_BASICRESP
 *bs, OCSP_CERTID *id, int last);
int OCSP_single_get0_status(OCSP_SINGLERESP *single, int *reason,
                            ASN1_GENERALIZEDTIME **revtime,
                            ASN1_GENERALIZEDTIME **thisupd,
                            ASN1_GENERALIZEDTIME **nextupd);
int OCSP_resp_find_status(OCSP_BASICRESP *bs, OCSP_CERTID *id, int *status,
                          int *reason,
                          ASN1_GENERALIZEDTIME **revtime,
                          ASN1_GENERALIZEDTIME **thisupd,
                          ASN1_GENERALIZEDTIME **nextupd);
int OCSP_check_validity(ASN1_GENERALIZEDTIME *thisupd,
                        ASN1_GENERALIZEDTIME *nextupd, long sec, long maxsec);

int OCSP_request_verify(OCSP_REQUEST *req, STACK_OF(X509) *certs,
                        X509_STORE *store, unsigned long flags);

#  define OCSP_parse_url(url, host, port, path, ssl) \
   OSSL_HTTP_parse_url(url, ssl, NULL, host, port, NULL, path, NULL, NULL)

int OCSP_id_issuer_cmp(const
 OCSP_CERTID *a, const OCSP_CERTID *b);
int OCSP_id_cmp(const OCSP_CERTID *a, const OCSP_CERTID *b);

int OCSP_request_onereq_count(OCSP_REQUEST *req);
OCSP_ONEREQ *OCSP_request_onereq_get0(OCSP_REQUEST *req, int i);
OCSP_CERTID *OCSP_onereq_get0_id(OCSP_ONEREQ *one);
int OCSP_id_get0_info(ASN1_OCTET_STRING **piNameHash, ASN1_OBJECT **pmd,
                      ASN1_OCTET_STRING **pikeyHash,
                      ASN1_INTEGER **pserial, OCSP_CERTID *cid);
int OCSP_request_is_signed(OCSP_REQUEST *req);
OCSP_RESPONSE *OCSP_response_create(int status, OCSP_BASICRESP *bs);
OCSP_SINGLERESP *OCSP_basic_add1_status(OCSP_BASICRESP *rsp,
```

```
                            OCSP_CERTID *cid,
                            int status, int reason,
                            ASN1_TIME *revtime,
                            ASN1_TIME *thisupd,
                            ASN1_TIME *nextupd);
int OCSP_basic_add1_cert(OCSP_BASICRESP *resp,
 X509 *cert);
int OCSP_basic_sign(OCSP_BASICRESP *brsp,
                X509 *signer, EVP_PKEY *key, const EVP_MD *dgst,
                STACK_OF(X509) *certs, unsigned long flags);
int OCSP_basic_sign_ctx(OCSP_BASICRESP *brsp,
                  X509 *signer, EVP_MD_CTX *ctx,
                  STACK_OF(X509) *certs, unsigned long flags);
int OCSP_RESPID_set_by_name(OCSP_RESPID *respid, X509 *cert);
int OCSP_RESPID_set_by_key_ex(OCSP_RESPID *respid, X509 *cert,
                      OSSL_LIB_CTX *libctx, const char *propq);
int OCSP_RESPID_set_by_key(OCSP_RESPID *respid, X509 *cert);
int OCSP_RESPID_match_ex(OCSP_RESPID *respid, X509 *cert, OSSL_LIB_CTX *libctx,
                 const char *propq);
int OCSP_RESPID_match(OCSP_RESPID *respid, X509 *cert);

X509_EXTENSION *OCSP_crlID_new(const char *url, long *n, char *tim);

X509_EXTENSION *OCSP_accept_responses_new(char **oids);

X509_EXTENSION *OCSP_archive_cutoff_new(char *tim);

X509_EXTENSION *OCSP_url_svcloc_new(const
 X509_NAME *issuer, const char **urls);

int OCSP_REQUEST_get_ext_count(OCSP_REQUEST *x);
int OCSP_REQUEST_get_ext_by_NID(OCSP_REQUEST *x, int nid, int lastpos);
int OCSP_REQUEST_get_ext_by_OBJ(OCSP_REQUEST *x, const ASN1_OBJECT *obj,
                        int lastpos);
int OCSP_REQUEST_get_ext_by_critical(OCSP_REQUEST *x, int crit, int lastpos);
X509_EXTENSION *OCSP_REQUEST_get_ext(OCSP_REQUEST *x, int loc);
X509_EXTENSION *OCSP_REQUEST_delete_ext(OCSP_REQUEST *x, int loc);
void *OCSP_REQUEST_get1_ext_d2i(OCSP_REQUEST *x, int nid, int *crit,
                        int *idx);
int OCSP_REQUEST_add1_ext_i2d(OCSP_REQUEST *x, int nid, void *value, int crit,
                      unsigned long flags);
int OCSP_REQUEST_add_ext(OCSP_REQUEST *x, X509_EXTENSION *ex, int loc);

int OCSP_ONEREQ_get_ext_count(OCSP_ONEREQ *x);
int OCSP_ONEREQ_get_ext_by_NID(OCSP_ONEREQ *x, int nid, int lastpos);
int OCSP_ONEREQ_get_ext_by_OBJ(OCSP_ONEREQ *x, const
 ASN1_OBJECT *obj, int lastpos);
int OCSP_ONEREQ_get_ext_by_critical(OCSP_ONEREQ *x, int crit, int lastpos);
```

```
X509_EXTENSION *OCSP_ONEREQ_get_ext(OCSP_ONEREQ *x, int loc);
X509_EXTENSION *OCSP_ONEREQ_delete_ext(OCSP_ONEREQ *x, int loc);
void *OCSP_ONEREQ_get1_ext_d2i(OCSP_ONEREQ *x, int nid, int *crit, int *idx);
int OCSP_ONEREQ_add1_ext_i2d(OCSP_ONEREQ *x, int nid, void *value, int crit,
                             unsigned long flags);
int OCSP_ONEREQ_add_ext(OCSP_ONEREQ *x, X509_EXTENSION *ex, int loc);

int OCSP_BASICRESP_get_ext_count(OCSP_BASICRESP *x);
int OCSP_BASICRESP_get_ext_by_NID(OCSP_BASICRESP *x, int nid, int lastpos);
int OCSP_BASICRESP_get_ext_by_OBJ(OCSP_BASICRESP *x, const ASN1_OBJECT *obj,
                                  int lastpos);
int OCSP_BASICRESP_get_ext_by_critical(OCSP_BASICRESP *x, int crit,
                                       int lastpos);
X509_EXTENSION *OCSP_BASICRESP_get_ext(OCSP_BASICRESP *x, int loc);
X509_EXTENSION *OCSP_BASICRESP_delete_ext(OCSP_BASICRESP
 *x, int loc);
void *OCSP_BASICRESP_get1_ext_d2i(OCSP_BASICRESP *x, int nid, int *crit,
                                  int *idx);
int OCSP_BASICRESP_add1_ext_i2d(OCSP_BASICRESP *x, int nid, void *value,
                                int crit, unsigned long flags);
int OCSP_BASICRESP_add_ext(OCSP_BASICRESP *x, X509_EXTENSION *ex, int loc);

int OCSP_SINGLERESP_get_ext_count(OCSP_SINGLERESP *x);
int OCSP_SINGLERESP_get_ext_by_NID(OCSP_SINGLERESP *x, int nid, int lastpos);
int OCSP_SINGLERESP_get_ext_by_OBJ(OCSP_SINGLERESP *x, const ASN1_OBJECT *obj,
                                   int lastpos);
int OCSP_SINGLERESP_get_ext_by_critical(OCSP_SINGLERESP *x, int crit,
                                        int lastpos);
X509_EXTENSION *OCSP_SINGLERESP_get_ext(OCSP_SINGLERESP *x, int loc);
X509_EXTENSION *OCSP_SINGLERESP_delete_ext(OCSP_SINGLERESP *x, int loc);
void *OCSP_SINGLERESP_get1_ext_d2i(OCSP_SINGLERESP *x, int nid, int *crit,
                                   int
 *idx);
int OCSP_SINGLERESP_add1_ext_i2d(OCSP_SINGLERESP *x, int nid, void *value,
                                 int crit, unsigned long flags);
int OCSP_SINGLERESP_add_ext(OCSP_SINGLERESP *x, X509_EXTENSION *ex, int loc);
const OCSP_CERTID *OCSP_SINGLERESP_get0_id(const OCSP_SINGLERESP *x);

DECLARE_ASN1_FUNCTIONS(OCSP_SINGLERESP)
DECLARE_ASN1_FUNCTIONS(OCSP_CERTSTATUS)
DECLARE_ASN1_FUNCTIONS(OCSP_REVOKEDINFO)
DECLARE_ASN1_FUNCTIONS(OCSP_BASICRESP)
DECLARE_ASN1_FUNCTIONS(OCSP_RESPDATA)
DECLARE_ASN1_FUNCTIONS(OCSP_RESPID)
DECLARE_ASN1_FUNCTIONS(OCSP_RESPONSE)
DECLARE_ASN1_FUNCTIONS(OCSP_RESPBYTES)
DECLARE_ASN1_FUNCTIONS(OCSP_ONEREQ)
DECLARE_ASN1_FUNCTIONS(OCSP_CERTID)
```

```
DECLARE_ASN1_FUNCTIONS(OCSP_REQUEST)
DECLARE_ASN1_FUNCTIONS(OCSP_SIGNATURE)
DECLARE_ASN1_FUNCTIONS(OCSP_REQINFO)
DECLARE_ASN1_FUNCTIONS(OCSP_CRLID)
DECLARE_ASN1_FUNCTIONS(OCSP_SERVICELOC)

const char *OCSP_response_status_str(long s);
const char *OCSP_cert_status_str(long s);
const char *OCSP_crl_reason_str(long s);

int
 OCSP_REQUEST_print(BIO *bp, OCSP_REQUEST *a, unsigned long flags);
int OCSP_RESPONSE_print(BIO *bp, OCSP_RESPONSE *o, unsigned long flags);

int OCSP_basic_verify(OCSP_BASICRESP *bs, STACK_OF(X509) *certs,
                      X509_STORE *st, unsigned long flags);


#  ifdef  __cplusplus
}
#  endif
# endif /* !defined(OPENSSL_NO_OCSP) */
#endif
Alexander Rose [@arose](https://github.com/arose)
Alexandru Mrteanu [@alexei](https://github.com/alexei)
Andras [@andrasq](https://github.com/andrasq)
Benoit Giannangeli [@giann](https://github.com/giann)
Branden Visser [@mrvisser](https://github.com/mrvisser)
David Baird
daurnimator [@daurnimator](https://github.com/daurnimator)
Doug Beck [@beck](https://github.com/beck)
Dzmitry Litskalau [@litmit](https://github.com/litmit)
Fred Ludlow [@fredludlow](https://github.com/fredludlow)
Hans Pufal
Henry [@alograg](https://github.com/alograg)
Johnny Shields [@johnnyshields](https://github.com/johnnyshields)
Kamal Abdali
Matt Simerson [@msimerson](https://github.com/msimerson)
Maxime Robert [@marob](https://github.com/marob)
MeriemKhelifi [@MeriemKhelifi](https://github.com/MeriemKhelifi)
Michael Schramm [@wodka](https://github.com/wodka)
Nazar Mokrynskyi [@nazar-pc](https://github.com/nazar-pc)
Oliver Salzburg [@oliversalzburg](https://github.com/oliversalzburg)
Pablo [@ppollono](https://github.com/ppollono)
Rabehaja
 Stevens [@RABEHAJA-STEVENS](https://github.com/RABEHAJA-STEVENS)
Raphael Pigulla [@pigulla](https://github.com/pigulla)
rebeccapeltz [@rebeccapeltz](https://github.com/rebeccapeltz)
```

Stefan Tingstrm [@stingstrom](https://github.com/stingstrom)
Tim Gates [@timgates42](https://github.com/timgates42)
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/pkcs7.h.in
*
* Copyright 1995-2023 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

```
#ifndef OPENSSL_PKCS7_H
# define OPENSSL_PKCS7_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_PKCS7_H
# endif

# include <openssl/asn1.h>
# include <openssl/bio.h>
# include <openssl/e_os2.h>

# include <openssl/symhacks.h>
# include <openssl/types.h>
# include <openssl/pkcs7err.h>

#ifdef  __cplusplus
extern "C" {
#endif


/*-
Encryption_ID          DES-CBC
Digest_ID              MD5
Digest_Encryption_ID    rsaEncryption
Key_Encryption_ID       rsaEncryption
*/

typedef struct PKCS7_CTX_st {
  OSSL_LIB_CTX *libctx;
```

```
    char *propq;
} PKCS7_CTX;

typedef struct pkcs7_issuer_and_serial_st {
  X509_NAME *issuer;
  ASN1_INTEGER *serial;
} PKCS7_ISSUER_AND_SERIAL;

typedef struct pkcs7_signer_info_st {
  ASN1_INTEGER *version;      /* version 1 */
  PKCS7_ISSUER_AND_SERIAL *issuer_and_serial;
  X509_ALGOR *digest_alg;
  STACK_OF(X509_ATTRIBUTE) *auth_attr; /* [ 0 ] */
  X509_ALGOR *digest_enc_alg; /* confusing name, actually used for signing */
  ASN1_OCTET_STRING *enc_digest; /* confusing name, actually signature */
  STACK_OF(X509_ATTRIBUTE) *unauth_attr; /* [ 1 ] */
  /* The private key to sign with */
  EVP_PKEY *pkey;
  const PKCS7_CTX *ctx;
} PKCS7_SIGNER_INFO;
SKM_DEFINE_STACK_OF_INTERNAL(PKCS7_SIGNER_INFO, PKCS7_SIGNER_INFO,
PKCS7_SIGNER_INFO)
#define sk_PKCS7_SIGNER_INFO_num(sk)
OPENSSL_sk_num(ossl_check_const_PKCS7_SIGNER_INFO_sk_type(sk))
#define sk_PKCS7_SIGNER_INFO_value(sk, idx) ((PKCS7_SIGNER_INFO
*)OPENSSL_sk_value(ossl_check_const_PKCS7_SIGNER_INFO_sk_type(sk),
 (idx)))
#define sk_PKCS7_SIGNER_INFO_new(cmp) ((STACK_OF(PKCS7_SIGNER_INFO)
*)OPENSSL_sk_new(ossl_check_PKCS7_SIGNER_INFO_compfunc_type(cmp)))
#define sk_PKCS7_SIGNER_INFO_new_null() ((STACK_OF(PKCS7_SIGNER_INFO)
*)OPENSSL_sk_new_null())
#define sk_PKCS7_SIGNER_INFO_new_reserve(cmp, n) ((STACK_OF(PKCS7_SIGNER_INFO)
*)OPENSSL_sk_new_reserve(ossl_check_PKCS7_SIGNER_INFO_compfunc_type(cmp), (n)))
#define sk_PKCS7_SIGNER_INFO_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk), (n))
#define sk_PKCS7_SIGNER_INFO_free(sk)
OPENSSL_sk_free(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk))
#define sk_PKCS7_SIGNER_INFO_zero(sk)
OPENSSL_sk_zero(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk))
#define sk_PKCS7_SIGNER_INFO_delete(sk, i) ((PKCS7_SIGNER_INFO
*)OPENSSL_sk_delete(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk), (i)))
#define sk_PKCS7_SIGNER_INFO_delete_ptr(sk, ptr) ((PKCS7_SIGNER_INFO
*)OPENSSL_sk_delete_ptr(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk),
ossl_check_PKCS7_SIGNER_INFO_type(ptr)))
#define
 sk_PKCS7_SIGNER_INFO_push(sk, ptr) OPENSSL_sk_push(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk),
ossl_check_PKCS7_SIGNER_INFO_type(ptr))
#define sk_PKCS7_SIGNER_INFO_unshift(sk, ptr)
```

```
OPENSSL_sk_unshift(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk),
ossl_check_PKCS7_SIGNER_INFO_type(ptr))
#define sk_PKCS7_SIGNER_INFO_pop(sk) ((PKCS7_SIGNER_INFO
*)OPENSSL_sk_pop(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk)))
#define sk_PKCS7_SIGNER_INFO_shift(sk) ((PKCS7_SIGNER_INFO
*)OPENSSL_sk_shift(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk)))
#define sk_PKCS7_SIGNER_INFO_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk),ossl_check_PKCS7_SIGNER_INFO_fr
eefunc_type(freefunc))
#define sk_PKCS7_SIGNER_INFO_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk),
ossl_check_PKCS7_SIGNER_INFO_type(ptr), (idx))
#define sk_PKCS7_SIGNER_INFO_set(sk, idx, ptr) ((PKCS7_SIGNER_INFO
*)OPENSSL_sk_set(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk), (idx),
ossl_check_PKCS7_SIGNER_INFO_type(ptr)))
#define
 sk_PKCS7_SIGNER_INFO_find(sk, ptr) OPENSSL_sk_find(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk),
ossl_check_PKCS7_SIGNER_INFO_type(ptr))
#define sk_PKCS7_SIGNER_INFO_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk),
ossl_check_PKCS7_SIGNER_INFO_type(ptr))
#define sk_PKCS7_SIGNER_INFO_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk),
ossl_check_PKCS7_SIGNER_INFO_type(ptr), pnum)
#define sk_PKCS7_SIGNER_INFO_sort(sk) OPENSSL_sk_sort(ossl_check_PKCS7_SIGNER_INFO_sk_type(sk))
#define sk_PKCS7_SIGNER_INFO_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_PKCS7_SIGNER_INFO_sk_type(sk))
#define sk_PKCS7_SIGNER_INFO_dup(sk) ((STACK_OF(PKCS7_SIGNER_INFO)
*)OPENSSL_sk_dup(ossl_check_const_PKCS7_SIGNER_INFO_sk_type(sk)))
#define sk_PKCS7_SIGNER_INFO_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(PKCS7_SIGNER_INFO)
*)OPENSSL_sk_deep_copy(ossl_check_const_PKCS7_SIGNER_INFO_sk_type(sk),
ossl_check_PKCS7_SIGNER_INFO_copyfunc_type(copyfunc),
 ossl_check_PKCS7_SIGNER_INFO_freefunc_type(freefunc)))
#define sk_PKCS7_SIGNER_INFO_set_cmp_func(sk, cmp)
((sk_PKCS7_SIGNER_INFO_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_PKCS7_SIGNER_INFO_sk_ty
pe(sk), ossl_check_PKCS7_SIGNER_INFO_compfunc_type(cmp)))


typedef struct pkcs7_recip_info_st {
  ASN1_INTEGER *version;      /* version 0 */
  PKCS7_ISSUER_AND_SERIAL *issuer_and_serial;
  X509_ALGOR *key_enc_algor;
  ASN1_OCTET_STRING *enc_key;
  X509 *cert;                 /* get the pub-key from this */
  const PKCS7_CTX *ctx;
} PKCS7_RECIP_INFO;
SKM_DEFINE_STACK_OF_INTERNAL(PKCS7_RECIP_INFO, PKCS7_RECIP_INFO, PKCS7_RECIP_INFO)
#define sk_PKCS7_RECIP_INFO_num(sk)
```

```
OPENSSL_sk_num(ossl_check_const_PKCS7_RECIP_INFO_sk_type(sk))
#define sk_PKCS7_RECIP_INFO_value(sk, idx) ((PKCS7_RECIP_INFO
*)OPENSSL_sk_value(ossl_check_const_PKCS7_RECIP_INFO_sk_type(sk), (idx)))
#define sk_PKCS7_RECIP_INFO_new(cmp) ((STACK_OF(PKCS7_RECIP_INFO)
*)OPENSSL_sk_new(ossl_check_PKCS7_RECIP_INFO_compfunc_type(cmp)))
#define
 sk_PKCS7_RECIP_INFO_new_null() ((STACK_OF(PKCS7_RECIP_INFO) *)OPENSSL_sk_new_null())
#define sk_PKCS7_RECIP_INFO_new_reserve(cmp, n) ((STACK_OF(PKCS7_RECIP_INFO)
*)OPENSSL_sk_new_reserve(ossl_check_PKCS7_RECIP_INFO_compfunc_type(cmp), (n)))
#define sk_PKCS7_RECIP_INFO_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_PKCS7_RECIP_INFO_sk_type(sk), (n))
#define sk_PKCS7_RECIP_INFO_free(sk) OPENSSL_sk_free(ossl_check_PKCS7_RECIP_INFO_sk_type(sk))
#define sk_PKCS7_RECIP_INFO_zero(sk) OPENSSL_sk_zero(ossl_check_PKCS7_RECIP_INFO_sk_type(sk))
#define sk_PKCS7_RECIP_INFO_delete(sk, i) ((PKCS7_RECIP_INFO
*)OPENSSL_sk_delete(ossl_check_PKCS7_RECIP_INFO_sk_type(sk), (i)))
#define sk_PKCS7_RECIP_INFO_delete_ptr(sk, ptr) ((PKCS7_RECIP_INFO
*)OPENSSL_sk_delete_ptr(ossl_check_PKCS7_RECIP_INFO_sk_type(sk),
ossl_check_PKCS7_RECIP_INFO_type(ptr)))
#define sk_PKCS7_RECIP_INFO_push(sk, ptr)
OPENSSL_sk_push(ossl_check_PKCS7_RECIP_INFO_sk_type(sk), ossl_check_PKCS7_RECIP_INFO_type(ptr))
#define
 sk_PKCS7_RECIP_INFO_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_PKCS7_RECIP_INFO_sk_type(sk),
ossl_check_PKCS7_RECIP_INFO_type(ptr))
#define sk_PKCS7_RECIP_INFO_pop(sk) ((PKCS7_RECIP_INFO
*)OPENSSL_sk_pop(ossl_check_PKCS7_RECIP_INFO_sk_type(sk)))
#define sk_PKCS7_RECIP_INFO_shift(sk) ((PKCS7_RECIP_INFO
*)OPENSSL_sk_shift(ossl_check_PKCS7_RECIP_INFO_sk_type(sk)))
#define sk_PKCS7_RECIP_INFO_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_PKCS7_RECIP_INFO_sk_type(sk),ossl_check_PKCS7_RECIP_INFO_freefu
nc_type(freefunc))
#define sk_PKCS7_RECIP_INFO_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_PKCS7_RECIP_INFO_sk_type(sk),
ossl_check_PKCS7_RECIP_INFO_type(ptr), (idx))
#define sk_PKCS7_RECIP_INFO_set(sk, idx, ptr) ((PKCS7_RECIP_INFO
*)OPENSSL_sk_set(ossl_check_PKCS7_RECIP_INFO_sk_type(sk), (idx),
ossl_check_PKCS7_RECIP_INFO_type(ptr)))
#define sk_PKCS7_RECIP_INFO_find(sk, ptr)
OPENSSL_sk_find(ossl_check_PKCS7_RECIP_INFO_sk_type(sk), ossl_check_PKCS7_RECIP_INFO_type(ptr))
#define
 sk_PKCS7_RECIP_INFO_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_PKCS7_RECIP_INFO_sk_type(sk),
ossl_check_PKCS7_RECIP_INFO_type(ptr))
#define sk_PKCS7_RECIP_INFO_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_PKCS7_RECIP_INFO_sk_type(sk),
ossl_check_PKCS7_RECIP_INFO_type(ptr), pnum)
#define sk_PKCS7_RECIP_INFO_sort(sk) OPENSSL_sk_sort(ossl_check_PKCS7_RECIP_INFO_sk_type(sk))
#define sk_PKCS7_RECIP_INFO_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_PKCS7_RECIP_INFO_sk_type(sk))
```

```
#define sk_PKCS7_RECIP_INFO_dup(sk) ((STACK_OF(PKCS7_RECIP_INFO)
*)OPENSSL_sk_dup(ossl_check_const_PKCS7_RECIP_INFO_sk_type(sk)))
#define sk_PKCS7_RECIP_INFO_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(PKCS7_RECIP_INFO)
*)OPENSSL_sk_deep_copy(ossl_check_const_PKCS7_RECIP_INFO_sk_type(sk),
ossl_check_PKCS7_RECIP_INFO_copyfunc_type(copyfunc),
ossl_check_PKCS7_RECIP_INFO_freefunc_type(freefunc)))
#define sk_PKCS7_RECIP_INFO_set_cmp_func(sk, cmp)
((sk_PKCS7_RECIP_INFO_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_PKCS7_RECIP_INFO_sk_type(s
k),
 ossl_check_PKCS7_RECIP_INFO_compfunc_type(cmp)))



typedef struct pkcs7_signed_st {
  ASN1_INTEGER *version;      /* version 1 */
  STACK_OF(X509_ALGOR) *md_algs; /* md used */
  STACK_OF(X509) *cert;       /* [ 0 ] */
  STACK_OF(X509_CRL) *crl;    /* [ 1 ] */
  STACK_OF(PKCS7_SIGNER_INFO) *signer_info;
  struct pkcs7_st *contents;
} PKCS7_SIGNED;
/*
* The above structure is very very similar to PKCS7_SIGN_ENVELOPE. How about
* merging the two
*/

typedef struct pkcs7_enc_content_st {
  ASN1_OBJECT *content_type;
  X509_ALGOR *algorithm;
  ASN1_OCTET_STRING *enc_data; /* [ 0 ] */
  const EVP_CIPHER *cipher;
  const PKCS7_CTX *ctx;
} PKCS7_ENC_CONTENT;

typedef struct pkcs7_enveloped_st {
  ASN1_INTEGER *version;      /* version 0 */
  STACK_OF(PKCS7_RECIP_INFO) *recipientinfo;
  PKCS7_ENC_CONTENT *enc_data;
} PKCS7_ENVELOPE;

typedef struct pkcs7_signedandenveloped_st {
   ASN1_INTEGER *version;      /* version 1 */
  STACK_OF(X509_ALGOR) *md_algs; /* md used */
  STACK_OF(X509) *cert;       /* [ 0 ] */
  STACK_OF(X509_CRL) *crl;    /* [ 1 ] */
  STACK_OF(PKCS7_SIGNER_INFO) *signer_info;
  PKCS7_ENC_CONTENT *enc_data;
  STACK_OF(PKCS7_RECIP_INFO) *recipientinfo;
```

```
} PKCS7_SIGN_ENVELOPE;

typedef struct pkcs7_digest_st {
  ASN1_INTEGER *version;     /* version 0 */
  X509_ALGOR *md;            /* md used */
  struct pkcs7_st *contents;
  ASN1_OCTET_STRING *digest;
} PKCS7_DIGEST;

typedef struct pkcs7_encrypted_st {
  ASN1_INTEGER *version;     /* version 0 */
  PKCS7_ENC_CONTENT *enc_data;
} PKCS7_ENCRYPT;

typedef struct pkcs7_st {
  /*
   * The following is non NULL if it contains ASN1 encoding of this
   * structure
   */
  unsigned char *asn1;
  long length;
# define PKCS7_S_HEADER  0
# define PKCS7_S_BODY    1
# define PKCS7_S_TAIL    2
  int state;                 /* used during processing */
  int detached;
   ASN1_OBJECT *type;
  /* content as defined by the type */
  /*
   * all encryption/message digests are applied to the 'contents', leaving
   * out the 'type' field.
   */
  union {
     char *ptr;
     /* NID_pkcs7_data */
     ASN1_OCTET_STRING *data;
     /* NID_pkcs7_signed */
     PKCS7_SIGNED *sign;
     /* NID_pkcs7_enveloped */
     PKCS7_ENVELOPE *enveloped;
     /* NID_pkcs7_signedAndEnveloped */
     PKCS7_SIGN_ENVELOPE *signed_and_enveloped;
     /* NID_pkcs7_digest */
     PKCS7_DIGEST *digest;
     /* NID_pkcs7_encrypted */
     PKCS7_ENCRYPT *encrypted;
     /* Anything else */
     ASN1_TYPE *other;
```

```
  } d;
  PKCS7_CTX ctx;
} PKCS7;
SKM_DEFINE_STACK_OF_INTERNAL(PKCS7, PKCS7, PKCS7)
#define sk_PKCS7_num(sk) OPENSSL_sk_num(ossl_check_const_PKCS7_sk_type(sk))
#define sk_PKCS7_value(sk, idx) ((PKCS7 *)OPENSSL_sk_value(ossl_check_const_PKCS7_sk_type(sk), (idx)))
#define sk_PKCS7_new(cmp) ((STACK_OF(PKCS7)
*)OPENSSL_sk_new(ossl_check_PKCS7_compfunc_type(cmp)))
#define
 sk_PKCS7_new_null() ((STACK_OF(PKCS7) *)OPENSSL_sk_new_null())
#define sk_PKCS7_new_reserve(cmp, n) ((STACK_OF(PKCS7)
*)OPENSSL_sk_new_reserve(ossl_check_PKCS7_compfunc_type(cmp), (n)))
#define sk_PKCS7_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_PKCS7_sk_type(sk), (n))
#define sk_PKCS7_free(sk) OPENSSL_sk_free(ossl_check_PKCS7_sk_type(sk))
#define sk_PKCS7_zero(sk) OPENSSL_sk_zero(ossl_check_PKCS7_sk_type(sk))
#define sk_PKCS7_delete(sk, i) ((PKCS7 *)OPENSSL_sk_delete(ossl_check_PKCS7_sk_type(sk), (i)))
#define sk_PKCS7_delete_ptr(sk, ptr) ((PKCS7 *)OPENSSL_sk_delete_ptr(ossl_check_PKCS7_sk_type(sk),
ossl_check_PKCS7_type(ptr)))
#define sk_PKCS7_push(sk, ptr) OPENSSL_sk_push(ossl_check_PKCS7_sk_type(sk),
ossl_check_PKCS7_type(ptr))
#define sk_PKCS7_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_PKCS7_sk_type(sk),
ossl_check_PKCS7_type(ptr))
#define sk_PKCS7_pop(sk) ((PKCS7 *)OPENSSL_sk_pop(ossl_check_PKCS7_sk_type(sk)))
#define
 sk_PKCS7_shift(sk) ((PKCS7 *)OPENSSL_sk_shift(ossl_check_PKCS7_sk_type(sk)))
#define sk_PKCS7_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_PKCS7_sk_type(sk),ossl_check_PKCS7_freefunc_type(freefunc))
#define sk_PKCS7_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_PKCS7_sk_type(sk),
ossl_check_PKCS7_type(ptr), (idx))
#define sk_PKCS7_set(sk, idx, ptr) ((PKCS7 *)OPENSSL_sk_set(ossl_check_PKCS7_sk_type(sk), (idx),
ossl_check_PKCS7_type(ptr)))
#define sk_PKCS7_find(sk, ptr) OPENSSL_sk_find(ossl_check_PKCS7_sk_type(sk),
ossl_check_PKCS7_type(ptr))
#define sk_PKCS7_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_PKCS7_sk_type(sk),
ossl_check_PKCS7_type(ptr))
#define sk_PKCS7_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_PKCS7_sk_type(sk),
ossl_check_PKCS7_type(ptr), pnum)
#define sk_PKCS7_sort(sk) OPENSSL_sk_sort(ossl_check_PKCS7_sk_type(sk))
#define sk_PKCS7_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_PKCS7_sk_type(sk))
#define sk_PKCS7_dup(sk) ((STACK_OF(PKCS7)
 *)OPENSSL_sk_dup(ossl_check_const_PKCS7_sk_type(sk)))
#define sk_PKCS7_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(PKCS7)
*)OPENSSL_sk_deep_copy(ossl_check_const_PKCS7_sk_type(sk),
ossl_check_PKCS7_copyfunc_type(copyfunc), ossl_check_PKCS7_freefunc_type(freefunc)))
#define sk_PKCS7_set_cmp_func(sk, cmp)
((sk_PKCS7_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_PKCS7_sk_type(sk),
ossl_check_PKCS7_compfunc_type(cmp)))
```

```
# define PKCS7_OP_SET_DETACHED_SIGNATURE 1
# define PKCS7_OP_GET_DETACHED_SIGNATURE 2

# define PKCS7_get_signed_attributes(si) ((si)->auth_attr)
# define PKCS7_get_attributes(si)        ((si)->unauth_attr)

# define PKCS7_type_is_signed(a) (OBJ_obj2nid((a)->type) == NID_pkcs7_signed)
# define PKCS7_type_is_encrypted(a) (OBJ_obj2nid((a)->type) == NID_pkcs7_encrypted)
# define PKCS7_type_is_enveloped(a) (OBJ_obj2nid((a)->type) == NID_pkcs7_enveloped)
# define PKCS7_type_is_signedAndEnveloped(a) \
            (OBJ_obj2nid((a)->type) == NID_pkcs7_signedAndEnveloped)
#
 define PKCS7_type_is_data(a)   (OBJ_obj2nid((a)->type) == NID_pkcs7_data)
# define PKCS7_type_is_digest(a)   (OBJ_obj2nid((a)->type) == NID_pkcs7_digest)

# define PKCS7_set_detached(p,v) \
            PKCS7_ctrl(p,PKCS7_OP_SET_DETACHED_SIGNATURE,v,NULL)
# define PKCS7_get_detached(p) \
            PKCS7_ctrl(p,PKCS7_OP_GET_DETACHED_SIGNATURE,0,NULL)

# define PKCS7_is_detached(p7) (PKCS7_type_is_signed(p7) && PKCS7_get_detached(p7))

/* S/MIME related flags */

# define PKCS7_TEXT             0x1
# define PKCS7_NOCERTS          0x2
# define PKCS7_NOSIGS           0x4
# define PKCS7_NOCHAIN          0x8
# define PKCS7_NOINTERN         0x10
# define PKCS7_NOVERIFY         0x20
# define PKCS7_DETACHED         0x40
# define PKCS7_BINARY           0x80
# define PKCS7_NOATTR           0x100
# define PKCS7_NOSMIMECAP       0x200
# define PKCS7_NOOLDMIMETYPE    0x400
# define PKCS7_CRLFEOL          0x800
# define PKCS7_STREAM           0x1000
# define PKCS7_NOCRL
     0x2000
# define PKCS7_PARTIAL          0x4000
# define PKCS7_REUSE_DIGEST     0x8000
# define PKCS7_NO_DUAL_CONTENT  0x10000

/* Flags: for compatibility with older code */

# define SMIME_TEXT     PKCS7_TEXT
```

```
# define SMIME_NOCERTS   PKCS7_NOCERTS
# define SMIME_NOSIGS    PKCS7_NOSIGS
# define SMIME_NOCHAIN   PKCS7_NOCHAIN
# define SMIME_NOINTERN  PKCS7_NOINTERN
# define SMIME_NOVERIFY  PKCS7_NOVERIFY
# define SMIME_DETACHED  PKCS7_DETACHED
# define SMIME_BINARY    PKCS7_BINARY
# define SMIME_NOATTR    PKCS7_NOATTR

/* CRLF ASCII canonicalisation */
# define SMIME_ASCIICRLF        0x80000

DECLARE_ASN1_FUNCTIONS(PKCS7_ISSUER_AND_SERIAL)

int PKCS7_ISSUER_AND_SERIAL_digest(PKCS7_ISSUER_AND_SERIAL *data,
                                   const EVP_MD *type, unsigned char *md,
                                   unsigned int *len);
# ifndef OPENSSL_NO_STDIO
PKCS7 *d2i_PKCS7_fp(FILE *fp, PKCS7 **p7);
int i2d_PKCS7_fp(FILE *fp, const PKCS7 *p7);
# endif
DECLARE_ASN1_DUP_FUNCTION(PKCS7)
PKCS7
 *d2i_PKCS7_bio(BIO *bp, PKCS7 **p7);
int i2d_PKCS7_bio(BIO *bp, const PKCS7 *p7);
int i2d_PKCS7_bio_stream(BIO *out, PKCS7 *p7, BIO *in, int flags);
int PEM_write_bio_PKCS7_stream(BIO *out, PKCS7 *p7, BIO *in, int flags);

DECLARE_ASN1_FUNCTIONS(PKCS7_SIGNER_INFO)
DECLARE_ASN1_FUNCTIONS(PKCS7_RECIP_INFO)
DECLARE_ASN1_FUNCTIONS(PKCS7_SIGNED)
DECLARE_ASN1_FUNCTIONS(PKCS7_ENC_CONTENT)
DECLARE_ASN1_FUNCTIONS(PKCS7_ENVELOPE)
DECLARE_ASN1_FUNCTIONS(PKCS7_SIGN_ENVELOPE)
DECLARE_ASN1_FUNCTIONS(PKCS7_DIGEST)
DECLARE_ASN1_FUNCTIONS(PKCS7_ENCRYPT)
DECLARE_ASN1_FUNCTIONS(PKCS7)
PKCS7 *PKCS7_new_ex(OSSL_LIB_CTX *libctx, const char *propq);

DECLARE_ASN1_ITEM(PKCS7_ATTR_SIGN)
DECLARE_ASN1_ITEM(PKCS7_ATTR_VERIFY)

DECLARE_ASN1_NDEF_FUNCTION(PKCS7)
DECLARE_ASN1_PRINT_FUNCTION(PKCS7)

long PKCS7_ctrl(PKCS7 *p7, int cmd, long larg, char *parg);

int PKCS7_type_is_other(PKCS7 *p7);
```

```
int PKCS7_set_type(PKCS7 *p7, int type);
int PKCS7_set0_type_other(PKCS7 *p7, int type, ASN1_TYPE *other);
int
 PKCS7_set_content(PKCS7 *p7, PKCS7 *p7_data);
int PKCS7_SIGNER_INFO_set(PKCS7_SIGNER_INFO *p7i, X509 *x509, EVP_PKEY *pkey,
                  const EVP_MD *dgst);
int PKCS7_SIGNER_INFO_sign(PKCS7_SIGNER_INFO *si);
int PKCS7_add_signer(PKCS7 *p7, PKCS7_SIGNER_INFO *p7i);
int PKCS7_add_certificate(PKCS7 *p7, X509 *x509);
int PKCS7_add_crl(PKCS7 *p7, X509_CRL *x509);
int PKCS7_content_new(PKCS7 *p7, int nid);
int PKCS7_dataVerify(X509_STORE *cert_store, X509_STORE_CTX *ctx,
                BIO *bio, PKCS7 *p7, PKCS7_SIGNER_INFO *si);
int PKCS7_signatureVerify(BIO *bio, PKCS7 *p7, PKCS7_SIGNER_INFO *si,
                  X509 *x509);

BIO *PKCS7_dataInit(PKCS7 *p7, BIO *bio);
int PKCS7_dataFinal(PKCS7 *p7, BIO *bio);
BIO *PKCS7_dataDecode(PKCS7 *p7, EVP_PKEY *pkey, BIO *in_bio, X509 *pcert);

PKCS7_SIGNER_INFO *PKCS7_add_signature(PKCS7 *p7, X509 *x509,
                           EVP_PKEY *pkey, const EVP_MD *dgst);
X509 *PKCS7_cert_from_signer_info(PKCS7 *p7,
 PKCS7_SIGNER_INFO *si);
int PKCS7_set_digest(PKCS7 *p7, const EVP_MD *md);
STACK_OF(PKCS7_SIGNER_INFO) *PKCS7_get_signer_info(PKCS7 *p7);

PKCS7_RECIP_INFO *PKCS7_add_recipient(PKCS7 *p7, X509 *x509);
void PKCS7_SIGNER_INFO_get0_algs(PKCS7_SIGNER_INFO *si, EVP_PKEY **pk,
                         X509_ALGOR **pdig, X509_ALGOR **psig);
void PKCS7_RECIP_INFO_get0_alg(PKCS7_RECIP_INFO *ri, X509_ALGOR **penc);
int PKCS7_add_recipient_info(PKCS7 *p7, PKCS7_RECIP_INFO *ri);
int PKCS7_RECIP_INFO_set(PKCS7_RECIP_INFO *p7i, X509 *x509);
int PKCS7_set_cipher(PKCS7 *p7, const EVP_CIPHER *cipher);
int PKCS7_stream(unsigned char ***boundary, PKCS7 *p7);

PKCS7_ISSUER_AND_SERIAL *PKCS7_get_issuer_and_serial(PKCS7 *p7, int idx);
ASN1_OCTET_STRING *PKCS7_get_octet_string(PKCS7 *p7);
ASN1_OCTET_STRING *PKCS7_digest_from_attributes(STACK_OF(X509_ATTRIBUTE) *sk);
int PKCS7_add_signed_attribute(PKCS7_SIGNER_INFO *p7si, int nid, int type,
                       void *data);
int PKCS7_add_attribute(PKCS7_SIGNER_INFO
 *p7si, int nid, int atrtype,
                 void *value);
ASN1_TYPE *PKCS7_get_attribute(const PKCS7_SIGNER_INFO *si, int nid);
ASN1_TYPE *PKCS7_get_signed_attribute(const PKCS7_SIGNER_INFO *si, int nid);
int PKCS7_set_signed_attributes(PKCS7_SIGNER_INFO *p7si,
                       STACK_OF(X509_ATTRIBUTE) *sk);
```

```
int PKCS7_set_attributes(PKCS7_SIGNER_INFO *p7si,
                         STACK_OF(X509_ATTRIBUTE) *sk);

PKCS7 *PKCS7_sign(X509 *signcert, EVP_PKEY *pkey, STACK_OF(X509) *certs,
                  BIO *data, int flags);
PKCS7 *PKCS7_sign_ex(X509 *signcert, EVP_PKEY *pkey, STACK_OF(X509) *certs,
                     BIO *data, int flags, OSSL_LIB_CTX *libctx,
                     const char *propq);

PKCS7_SIGNER_INFO *PKCS7_sign_add_signer(PKCS7 *p7,
                                         X509 *signcert, EVP_PKEY *pkey,
                                         const EVP_MD *md, int flags);

int PKCS7_final(PKCS7 *p7, BIO *data,
 int flags);
int PKCS7_verify(PKCS7 *p7, STACK_OF(X509) *certs, X509_STORE *store,
                 BIO *indata, BIO *out, int flags);
STACK_OF(X509) *PKCS7_get0_signers(PKCS7 *p7, STACK_OF(X509) *certs,
                                   int flags);
PKCS7 *PKCS7_encrypt(STACK_OF(X509) *certs, BIO *in, const EVP_CIPHER *cipher,
                     int flags);
PKCS7 *PKCS7_encrypt_ex(STACK_OF(X509) *certs, BIO *in,
                        const EVP_CIPHER *cipher, int flags,
                        OSSL_LIB_CTX *libctx, const char *propq);
int PKCS7_decrypt(PKCS7 *p7, EVP_PKEY *pkey, X509 *cert, BIO *data,
                  int flags);

int PKCS7_add_attrib_smimecap(PKCS7_SIGNER_INFO *si,
                              STACK_OF(X509_ALGOR) *cap);
STACK_OF(X509_ALGOR) *PKCS7_get_smimecap(PKCS7_SIGNER_INFO *si);
int PKCS7_simple_smimecap(STACK_OF(X509_ALGOR) *sk, int nid, int arg);

int PKCS7_add_attrib_content_type(PKCS7_SIGNER_INFO *si, ASN1_OBJECT *coid);
int PKCS7_add0_attrib_signing_time(PKCS7_SIGNER_INFO
 *si, ASN1_TIME *t);
int PKCS7_add1_attrib_digest(PKCS7_SIGNER_INFO *si,
                             const unsigned char *md, int mdlen);

int SMIME_write_PKCS7(BIO *bio, PKCS7 *p7, BIO *data, int flags);
PKCS7 *SMIME_read_PKCS7_ex(BIO *bio, BIO **bcont, PKCS7 **p7);
PKCS7 *SMIME_read_PKCS7(BIO *bio, BIO **bcont);

BIO *BIO_new_PKCS7(BIO *out, PKCS7 *p7);

# ifdef  __cplusplus
}
# endif
#endif
```

Copyright (c) 2015, Rebecca Turner <me@re-becca.org>

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
The Source Map Tests suite ("Software") is protected by copyright and is being made available under the "BSD License", included below. This Software may be subject to third party rights (rights from parties other than Ecma International), including patent rights, and no licenses under such third party rights are granted under this license even if the third party concerned is a member of Ecma International. SEE THE ECMA CODE OF CONDUCT IN PATENT MATTERS AVAILABLE AT https://www.ecma-international.org/ipr FOR INFORMATION REGARDING THE LICENSING OF PATENT CLAIMS THAT ARE REQUIRED TO IMPLEMENT ECMA INTERNATIONAL STANDARDS*.

Copyright (c) 2024, Ecma International
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must
reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

* Ecma International Standards hereafter means Ecma International Standards as well as Ecma Technical Reports

BSD 3-Clause License

Copyright (c) 2009-2015, Kevin Decker <kpdecker@gmail.com>
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
  list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
  this list of conditions and the following disclaimer in the documentation
  and/or other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its
  contributors may be used to endorse or promote products derived from
  this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
 PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER
CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
The ISC License

Copyright npm, Inc.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND NPM DISCLAIMS ALL WARRANTIES WITH REGARD
TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND
FITNESS. IN NO EVENT SHALL NPM BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR
CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS
ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS
SOFTWARE.
#ifndef SRC_PERMISSION_PERMISSION_H_
#define SRC_PERMISSION_PERMISSION_H_

```
#if defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS

#include "debug_utils.h"
#include "node_options.h"
#include "permission/child_process_permission.h"
#include "permission/fs_permission.h"
#include "permission/inspector_permission.h"
#include "permission/permission_base.h"
#include "permission/wasi_permission.h"
#include "permission/worker_permission.h"
#include "v8.h"

#include <string_view>
#include <unordered_map>

namespace node {

class Environment;

namespace fs {
class FSReqBase;
}

namespace permission {

#define THROW_IF_INSUFFICIENT_PERMISSIONS(env, perm_, resource_, ...)          \
 do {                                                                          \
  if (!env->permission()->is_granted(env, perm_, resource_)) [[unlikely]] {  \
    node::permission::Permission::ThrowAccessDenied(                          \
        (env), perm_, resource_);                                             \
    return __VA_ARGS__;                                                       \
  }                                                                           \
 } while (0)

#define ASYNC_THROW_IF_INSUFFICIENT_PERMISSIONS(                              \
  env, wrap, perm_, resource_, ...)                                           \
 do {                                                                         \
  if (!env->permission()->is_granted(env, perm_, resource_)) [[unlikely]] {  \
    node::permission::Permission::AsyncThrowAccessDenied(                     \
        (env), wrap, perm_, resource_);                                       \
    return __VA_ARGS__;                                                       \
  }                                                                           \
 } while (0)

class Permission {
public:
 Permission();
```

```
 FORCE_INLINE bool is_granted(Environment* env,
                              const PermissionScope permission,
                              const std::string_view& res = "") const {
   if (!enabled_) [[likely]] {
     return true;
   }
   return is_scope_granted(env, permission, res);
 }

 FORCE_INLINE bool enabled() const { return enabled_; }

 static PermissionScope StringToPermission(const std::string& perm);
 static const char* PermissionToString(PermissionScope perm);
 static void ThrowAccessDenied(Environment* env,
                               PermissionScope perm,
                               const std::string_view& res);
 static void AsyncThrowAccessDenied(Environment* env,
                                    fs::FSReqBase* req_wrap,
                                    PermissionScope perm,
                                    const std::string_view& res);

 // CLI Call
 void Apply(Environment* env,
            const std::vector<std::string>& allow,
            PermissionScope scope);
 void EnablePermissions();

private:
 COLD_NOINLINE bool is_scope_granted(Environment*
 env,
                                     const PermissionScope permission,
                                     const std::string_view& res = "") const {
   auto perm_node = nodes_.find(permission);
   if (perm_node != nodes_.end()) {
     return perm_node->second->is_granted(env, permission, res);
   }
   return false;
 }

 std::unordered_map<PermissionScope, std::shared_ptr<PermissionBase>> nodes_;
 bool enabled_;
};

}  // namespace permission

}  // namespace node
```

#endif // defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS
#endif // SRC_PERMISSION_PERMISSION_H_
UNRECOGNIZED LICENSE; MD5 sum: 2074ee7017462cb481bef4c65ad69044
MIT
Copyright (c) 2007-present, Alexandru Mrteanu <hello@alexei.ro>
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:
* Redistributions of source code must retain the above copyright
 notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright
 notice, this list of conditions and the following disclaimer in the
 documentation and/or other materials provided with the distribution.
* Neither the name of this software nor the names of its contributors may be
 used to endorse or promote products derived from this software without
 specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO
 EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
/*
* WARNING: do not edit!
* Generated by util/mkbuildinf.pl
*
* Copyright 2014-2025 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#define PLATFORM "platform: BSD-x86"
#define DATE "built on: Wed Mar 5 20:59:15 2025 UTC"

/*
* Generate compiler_flags as an array of individual characters. This is a
* workaround for the situation where CFLAGS gets too long for a C90 string
* literal

```
*/
static const char compiler_flags[] = {
  'c','o','m','p','i','l','e','r',':',' ','.','.','/','c','o','n',
  'f','i','g','/','f','a','k','e','_','g','c','c','.','p','l',' ',
  '-','f','P','I','C',' ','-','p','t','h','r','e','a','d',' ','-',
  'W','a',',','-','-','n','o','e','x','e','c','s','t','a','c','k',
  ' ','-','W','a','l','l','
 ','-','O','3',' ','-','f','o','m','i',
  't','-','f','r','a','m','e','-','p','o','i','n','t','e','r',' ',
  '-','D','L','_','E','N','D','I','A','N',' ','-','D','O','P','E',
  'N','S','S','L','_','P','I','C',' ','-','D','_','T','H','R','E',
  'A','D','_','S','A','F','E',' ','-','D','_','R','E','E','N','T',
  'R','A','N','T',' ','-','D','O','P','E','N','S','S','L','_','B',
  'U','I','L','D','I','N','G','_','O','P','E','N','S','S','L',' ',
  '-','D','N','D','E','B','U','G','\0'
};
```

Copyright Corepack contributors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
 THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
The MIT License (MIT)

Copyright (c) 2016 angus croll

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR

IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
[
 "AGPL-1.0",
 "AGPL-3.0",
 "BSD-2-Clause-FreeBSD",
 "BSD-2-Clause-NetBSD",
 "GFDL-1.1",
 "GFDL-1.2",
 "GFDL-1.3",
 "GPL-1.0",
 "GPL-2.0",
 "GPL-2.0-with-GCC-exception",
 "GPL-2.0-with-autoconf-exception",
 "GPL-2.0-with-bison-exception",
 "GPL-2.0-with-classpath-exception",
 "GPL-2.0-with-font-exception",
 "GPL-3.0",
 "GPL-3.0-with-GCC-exception",
 "GPL-3.0-with-autoconf-exception",
 "LGPL-2.0",
 "LGPL-2.1",
 "LGPL-3.0",
 "Net-SNMP",
 "Nunit",
 "StandardML-NJ",
 "bzip2-1.0.5",
 "eCos-2.0",
 "wxWindows"
]
```

Copyright Mathias Bynens <https://mathiasbynens.be/>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
MIT License

Copyright (c) 2013 Julian Gruber <julian@juliangruber.com>

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
{
 'variables': {
   'openssl_sources': [
     'openssl/ssl/bio_ssl.c',
     'openssl/ssl/d1_lib.c',
     'openssl/ssl/d1_msg.c',
     'openssl/ssl/d1_srtp.c',
     'openssl/ssl/methods.c',
     'openssl/ssl/pqueue.c',
     'openssl/ssl/s3_enc.c',
     'openssl/ssl/s3_lib.c',
     'openssl/ssl/s3_msg.c',
     'openssl/ssl/ssl_asn1.c',
     'openssl/ssl/ssl_cert.c',
     'openssl/ssl/ssl_ciph.c',
     'openssl/ssl/ssl_conf.c',
     'openssl/ssl/ssl_err.c',
     'openssl/ssl/ssl_err_legacy.c',

'openssl/ssl/ssl_init.c',
'openssl/ssl/ssl_lib.c',
'openssl/ssl/ssl_mcnf.c',
'openssl/ssl/ssl_rsa.c',
'openssl/ssl/ssl_rsa_legacy.c',
'openssl/ssl/ssl_sess.c',
'openssl/ssl/ssl_stat.c',
'openssl/ssl/ssl_txt.c',
'openssl/ssl/ssl_utst.c',
'openssl/ssl/t1_enc.c',
'openssl/ssl/t1_lib.c',
'openssl/ssl/t1_trce.c',
'openssl/ssl/tls13_enc.c',
'openssl/ssl/tls_depr.c',
'openssl/ssl/tls_srp.c',
'openssl/ssl/record/dtls1_bitmap.c',
'openssl/ssl/record/rec_layer_d1.c',
'openssl/ssl/record/rec_layer_s3.c',
'openssl/ssl/record/ssl3_buffer.c',
'openssl/ssl/record/ssl3_record.c',
'openssl/ssl/record/ssl3_record_tls13.c',
'openssl/ssl/statem/extensions.c',
'openssl/ssl/statem/extensions_clnt.c',
'openssl/ssl/statem/extensions_cust.c',
'openssl/ssl/statem/extensions_srvr.c',
'openssl/ssl/statem/statem.c',
'openssl/ssl/statem/statem_clnt.c',
'openssl/ssl/statem/statem_dtls.c',
'openssl/ssl/statem/statem_lib.c',
'openssl/ssl/statem/statem_srvr.c',
'openssl/crypto/aes/aes_cbc.c',
'openssl/crypto/aes/aes_cfb.c',
'openssl/crypto/aes/aes_core.c',
'openssl/crypto/aes/aes_ecb.c',
'openssl/crypto/aes/aes_ige.c',
'openssl/crypto/aes/aes_misc.c',
'openssl/crypto/aes/aes_ofb.c',
'openssl/crypto/aes/aes_wrap.c',
'openssl/crypto/aria/aria.c',
'openssl/crypto/asn1/a_bitstr.c',
'openssl/crypto/asn1/a_d2i_fp.c',
'openssl/crypto/asn1/a_digest.c',
'openssl/crypto/asn1/a_dup.c',
'openssl/crypto/asn1/a_gentm.c',
'openssl/crypto/asn1/a_i2d_fp.c',
'openssl/crypto/asn1/a_int.c',
'openssl/crypto/asn1/a_mbstr.c',
'openssl/crypto/asn1/a_object.c',

'openssl/crypto/asn1/a_octet.c',
'openssl/crypto/asn1/a_print.c',
'openssl/crypto/asn1/a_sign.c',
'openssl/crypto/asn1/a_strex.c',
'openssl/crypto/asn1/a_strnid.c',
'openssl/crypto/asn1/a_time.c',
'openssl/crypto/asn1/a_type.c',
'openssl/crypto/asn1/a_utctm.c',
'openssl/crypto/asn1/a_utf8.c',
'openssl/crypto/asn1/a_verify.c',
'openssl/crypto/asn1/ameth_lib.c',
'openssl/crypto/asn1/asn1_err.c',
'openssl/crypto/asn1/asn1_gen.c',
'openssl/crypto/asn1/asn1_item_list.c',
'openssl/crypto/asn1/asn1_lib.c',
'openssl/crypto/asn1/asn1_parse.c',
'openssl/crypto/asn1/asn_mime.c',
'openssl/crypto/asn1/asn_moid.c',
'openssl/crypto/asn1/asn_mstbl.c',
'openssl/crypto/asn1/asn_pack.c',
'openssl/crypto/asn1/bio_asn1.c',
'openssl/crypto/asn1/bio_ndef.c',
'openssl/crypto/asn1/d2i_param.c',
'openssl/crypto/asn1/d2i_pr.c',
'openssl/crypto/asn1/d2i_pu.c',
'openssl/crypto/asn1/evp_asn1.c',
'openssl/crypto/asn1/f_int.c',
'openssl/crypto/asn1/f_string.c',
'openssl/crypto/asn1/i2d_evp.c',
'openssl/crypto/asn1/n_pkey.c',
'openssl/crypto/asn1/nsseq.c',
'openssl/crypto/asn1/p5_pbe.c',
'openssl/crypto/asn1/p5_pbev2.c',
'openssl/crypto/asn1/p5_scrypt.c',
'openssl/crypto/asn1/p8_pkey.c',
'openssl/crypto/asn1/t_bitst.c',
'openssl/crypto/asn1/t_pkey.c',
'openssl/crypto/asn1/t_spki.c',
'openssl/crypto/asn1/tasn_dec.c',
'openssl/crypto/asn1/tasn_enc.c',
'openssl/crypto/asn1/tasn_fre.c',
'openssl/crypto/asn1/tasn_new.c',
'openssl/crypto/asn1/tasn_prn.c',
'openssl/crypto/asn1/tasn_scn.c',
'openssl/crypto/asn1/tasn_typ.c',
'openssl/crypto/asn1/tasn_utl.c',
'openssl/crypto/asn1/x_algor.c',
'openssl/crypto/asn1/x_bignum.c',

'openssl/crypto/asn1/x_info.c',
'openssl/crypto/asn1/x_int64.c',
'openssl/crypto/asn1/x_long.c',
'openssl/crypto/asn1/x_pkey.c',
'openssl/crypto/asn1/x_sig.c',
'openssl/crypto/asn1/x_spki.c',
'openssl/crypto/asn1/x_val.c',
'openssl/crypto/async/arch/async_null.c',
'openssl/crypto/async/arch/async_posix.c',
'openssl/crypto/async/arch/async_win.c',
'openssl/crypto/async/async.c',
'openssl/crypto/async/async_err.c',
'openssl/crypto/async/async_wait.c',
'openssl/crypto/bf/bf_cfb64.c',
'openssl/crypto/bf/bf_ecb.c',
'openssl/crypto/bf/bf_enc.c',
'openssl/crypto/bf/bf_ofb64.c',
'openssl/crypto/bf/bf_skey.c',
'openssl/crypto/bio/bf_buff.c',
'openssl/crypto/bio/bf_lbuf.c',
'openssl/crypto/bio/bf_nbio.c',
'openssl/crypto/bio/bf_null.c',
'openssl/crypto/bio/bf_prefix.c',
'openssl/crypto/bio/bf_readbuff.c',
'openssl/crypto/bio/bio_addr.c',
'openssl/crypto/bio/bio_cb.c',
'openssl/crypto/bio/bio_dump.c',
'openssl/crypto/bio/bio_err.c',
'openssl/crypto/bio/bio_lib.c',
'openssl/crypto/bio/bio_meth.c',
'openssl/crypto/bio/bio_print.c',
'openssl/crypto/bio/bio_sock.c',
'openssl/crypto/bio/bio_sock2.c',
'openssl/crypto/bio/bss_acpt.c',
'openssl/crypto/bio/bss_bio.c',
'openssl/crypto/bio/bss_conn.c',
'openssl/crypto/bio/bss_core.c',
'openssl/crypto/bio/bss_dgram.c',
'openssl/crypto/bio/bss_fd.c',
'openssl/crypto/bio/bss_file.c',
'openssl/crypto/bio/bss_log.c',
'openssl/crypto/bio/bss_mem.c',
'openssl/crypto/bio/bss_null.c',
'openssl/crypto/bio/bss_sock.c',
'openssl/crypto/bio/ossl_core_bio.c',

'openssl/crypto/bn/bn_add.c',
'openssl/crypto/bn/bn_asm.c',

'openssl/crypto/bn/bn_blind.c',
'openssl/crypto/bn/bn_const.c',
'openssl/crypto/bn/bn_conv.c',
'openssl/crypto/bn/bn_ctx.c',
'openssl/crypto/bn/bn_depr.c',
'openssl/crypto/bn/bn_dh.c',
'openssl/crypto/bn/bn_div.c',
'openssl/crypto/bn/bn_err.c',
'openssl/crypto/bn/bn_exp.c',
'openssl/crypto/bn/bn_exp2.c',
'openssl/crypto/bn/bn_gcd.c',
'openssl/crypto/bn/bn_gf2m.c',
'openssl/crypto/bn/bn_intern.c',
'openssl/crypto/bn/bn_kron.c',
'openssl/crypto/bn/bn_lib.c',
'openssl/crypto/bn/bn_mod.c',
'openssl/crypto/bn/bn_mont.c',
'openssl/crypto/bn/bn_mpi.c',
'openssl/crypto/bn/bn_mul.c',
'openssl/crypto/bn/bn_nist.c',
'openssl/crypto/bn/bn_prime.c',
'openssl/crypto/bn/bn_print.c',
'openssl/crypto/bn/bn_rand.c',
'openssl/crypto/bn/bn_recp.c',
'openssl/crypto/bn/bn_rsa_fips186_4.c',

'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_srp.c',
'openssl/crypto/bn/bn_word.c',
'openssl/crypto/bn/bn_x931p.c',
'openssl/crypto/buffer/buf_err.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/camellia/camellia.c',
'openssl/crypto/camellia/cmll_cbc.c',
'openssl/crypto/camellia/cmll_cfb.c',
'openssl/crypto/camellia/cmll_ctr.c',
'openssl/crypto/camellia/cmll_ecb.c',
'openssl/crypto/camellia/cmll_misc.c',
'openssl/crypto/camellia/cmll_ofb.c',
'openssl/crypto/cast/c_cfb64.c',
'openssl/crypto/cast/c_ecb.c',
'openssl/crypto/cast/c_enc.c',
'openssl/crypto/cast/c_ofb64.c',
'openssl/crypto/cast/c_skey.c',
'openssl/crypto/chacha/chacha_enc.c',
'openssl/crypto/cmac/cmac.c',

'openssl/crypto/cmp/cmp_asn.c',
'openssl/crypto/cmp/cmp_client.c',
'openssl/crypto/cmp/cmp_ctx.c',

'openssl/crypto/cmp/cmp_err.c',
'openssl/crypto/cmp/cmp_hdr.c',
'openssl/crypto/cmp/cmp_http.c',
'openssl/crypto/cmp/cmp_msg.c',
'openssl/crypto/cmp/cmp_protect.c',
'openssl/crypto/cmp/cmp_server.c',
'openssl/crypto/cmp/cmp_status.c',
'openssl/crypto/cmp/cmp_util.c',
'openssl/crypto/cmp/cmp_vfy.c',
'openssl/crypto/cms/cms_asn1.c',
'openssl/crypto/cms/cms_att.c',
'openssl/crypto/cms/cms_cd.c',
'openssl/crypto/cms/cms_dd.c',
'openssl/crypto/cms/cms_dh.c',
'openssl/crypto/cms/cms_ec.c',
'openssl/crypto/cms/cms_enc.c',
'openssl/crypto/cms/cms_env.c',
'openssl/crypto/cms/cms_err.c',
'openssl/crypto/cms/cms_ess.c',
'openssl/crypto/cms/cms_io.c',
'openssl/crypto/cms/cms_kari.c',
'openssl/crypto/cms/cms_lib.c',
'openssl/crypto/cms/cms_pwri.c',
'openssl/crypto/cms/cms_rsa.c',
'openssl/crypto/cms/cms_sd.c',
'openssl/crypto/cms/cms_smime.c',

'openssl/crypto/conf/conf_api.c',
'openssl/crypto/conf/conf_def.c',
'openssl/crypto/conf/conf_err.c',
'openssl/crypto/conf/conf_lib.c',
'openssl/crypto/conf/conf_mall.c',
'openssl/crypto/conf/conf_mod.c',
'openssl/crypto/conf/conf_sap.c',
'openssl/crypto/conf/conf_ssl.c',
'openssl/crypto/crmf/crmf_asn.c',
'openssl/crypto/crmf/crmf_err.c',
'openssl/crypto/crmf/crmf_lib.c',
'openssl/crypto/crmf/crmf_pbm.c',
'openssl/crypto/ct/ct_b64.c',
'openssl/crypto/ct/ct_err.c',
'openssl/crypto/ct/ct_log.c',
'openssl/crypto/ct/ct_oct.c',
'openssl/crypto/ct/ct_policy.c',

'openssl/crypto/ct/ct_prn.c',
'openssl/crypto/ct/ct_sct.c',
'openssl/crypto/ct/ct_sct_ctx.c',
'openssl/crypto/ct/ct_vfy.c',
'openssl/crypto/ct/ct_x509v3.c',
'openssl/crypto/des/cbc_cksm.c',
'openssl/crypto/des/cbc_enc.c',
'openssl/crypto/des/cfb64ede.c',
'openssl/crypto/des/cfb64enc.c',
'openssl/crypto/des/cfb_enc.c',
'openssl/crypto/des/des_enc.c',
'openssl/crypto/des/ecb3_enc.c',
'openssl/crypto/des/ecb_enc.c',
'openssl/crypto/des/fcrypt.c',
'openssl/crypto/des/fcrypt_b.c',
'openssl/crypto/des/ofb64ede.c',
'openssl/crypto/des/ofb64enc.c',
'openssl/crypto/des/ofb_enc.c',
'openssl/crypto/des/pcbc_enc.c',
'openssl/crypto/des/qud_cksm.c',
'openssl/crypto/des/rand_key.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/des/str2key.c',
'openssl/crypto/des/xcbc_enc.c',
'openssl/crypto/dh/dh_ameth.c',
'openssl/crypto/dh/dh_asn1.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_depr.c',
'openssl/crypto/dh/dh_err.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',

'openssl/crypto/dh/dh_meth.c',
'openssl/crypto/dh/dh_pmeth.c',
'openssl/crypto/dh/dh_prn.c',
'openssl/crypto/dh/dh_rfc5114.c',
'openssl/crypto/dsa/dsa_ameth.c',
'openssl/crypto/dsa/dsa_asn1.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_depr.c',
'openssl/crypto/dsa/dsa_err.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',

'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_meth.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_pmeth.c',
'openssl/crypto/dsa/dsa_prn.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/dso/dso_dl.c',
'openssl/crypto/dso/dso_dlfcn.c',
'openssl/crypto/dso/dso_err.c',
'openssl/crypto/dso/dso_lib.c',
'openssl/crypto/dso/dso_openssl.c',
'openssl/crypto/dso/dso_vms.c',
'openssl/crypto/dso/dso_win32.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_ameth.c',
'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_deprecated.c',
'openssl/crypto/ec/ec_err.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ec_pmeth.c',
'openssl/crypto/ec/ec_print.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/eck_prn.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_oct.c',

'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/ec/ecx_meth.c',
'openssl/crypto/encode_decode/decoder_err.c',
'openssl/crypto/encode_decode/decoder_lib.c',
'openssl/crypto/encode_decode/decoder_meth.c',
'openssl/crypto/encode_decode/decoder_pkey.c',
'openssl/crypto/encode_decode/encoder_err.c',
'openssl/crypto/encode_decode/encoder_lib.c',
'openssl/crypto/encode_decode/encoder_meth.c',
'openssl/crypto/encode_decode/encoder_pkey.c',
'openssl/crypto/engine/eng_all.c',
'openssl/crypto/engine/eng_cnf.c',
'openssl/crypto/engine/eng_ctrl.c',
'openssl/crypto/engine/eng_dyn.c',
'openssl/crypto/engine/eng_err.c',
'openssl/crypto/engine/eng_fat.c',
'openssl/crypto/engine/eng_init.c',
'openssl/crypto/engine/eng_lib.c',
'openssl/crypto/engine/eng_list.c',
'openssl/crypto/engine/eng_openssl.c',
'openssl/crypto/engine/eng_pkey.c',
'openssl/crypto/engine/eng_rdrand.c',
'openssl/crypto/engine/eng_table.c',
'openssl/crypto/engine/tb_asnmth.c',
'openssl/crypto/engine/tb_cipher.c',
'openssl/crypto/engine/tb_dh.c',
'openssl/crypto/engine/tb_digest.c',
'openssl/crypto/engine/tb_dsa.c',
'openssl/crypto/engine/tb_eckey.c',
'openssl/crypto/engine/tb_pkmeth.c',
'openssl/crypto/engine/tb_rand.c',
'openssl/crypto/engine/tb_rsa.c',
'openssl/crypto/err/err.c',
'openssl/crypto/err/err_all.c',
'openssl/crypto/err/err_all_legacy.c',
'openssl/crypto/err/err_blocks.c',
'openssl/crypto/err/err_prn.c',
'openssl/crypto/ess/ess_asn1.c',
'openssl/crypto/ess/ess_err.c',
'openssl/crypto/ess/ess_lib.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/bio_b64.c',
'openssl/crypto/evp/bio_enc.c',
'openssl/crypto/evp/bio_md.c',
'openssl/crypto/evp/bio_ok.c',
'openssl/crypto/evp/c_allc.c',

'openssl/crypto/evp/c_alld.c',
'openssl/crypto/evp/cmeth_lib.c',
'openssl/crypto/evp/ctrl_params_translate.c',
'openssl/crypto/evp/dh_ctrl.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/dsa_ctrl.c',
'openssl/crypto/evp/e_aes.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha1.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha256.c',
'openssl/crypto/evp/e_aria.c',
'openssl/crypto/evp/e_bf.c',
'openssl/crypto/evp/e_camellia.c',
'openssl/crypto/evp/e_cast.c',
'openssl/crypto/evp/e_chacha20_poly1305.c',
'openssl/crypto/evp/e_des.c',
'openssl/crypto/evp/e_des3.c',
'openssl/crypto/evp/e_idea.c',
'openssl/crypto/evp/e_null.c',
'openssl/crypto/evp/e_old.c',
'openssl/crypto/evp/e_rc2.c',
'openssl/crypto/evp/e_rc4.c',
'openssl/crypto/evp/e_rc4_hmac_md5.c',
'openssl/crypto/evp/e_rc5.c',
'openssl/crypto/evp/e_seed.c',
'openssl/crypto/evp/e_sm4.c',
'openssl/crypto/evp/e_xcbc_d.c',
'openssl/crypto/evp/ec_ctrl.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/encode.c',
'openssl/crypto/evp/evp_cnf.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_err.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_key.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_pbe.c',
'openssl/crypto/evp/evp_pkey.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/legacy_blake2.c',
'openssl/crypto/evp/legacy_md4.c',

'openssl/crypto/evp/legacy_md5.c',
'openssl/crypto/evp/legacy_md5_sha1.c',
'openssl/crypto/evp/legacy_mdc2.c',
'openssl/crypto/evp/legacy_ripemd.c',
'openssl/crypto/evp/legacy_sha.c',
'openssl/crypto/evp/legacy_wp.c',
'openssl/crypto/evp/m_null.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/names.c',
'openssl/crypto/evp/p5_crpt.c',
'openssl/crypto/evp/p5_crpt2.c',
'openssl/crypto/evp/p_dec.c',
'openssl/crypto/evp/p_enc.c',
'openssl/crypto/evp/p_legacy.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/p_open.c',
'openssl/crypto/evp/p_seal.c',
'openssl/crypto/evp/p_sign.c',
'openssl/crypto/evp/p_verify.c',
'openssl/crypto/evp/pbe_scrypt.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/http/http_client.c',
'openssl/crypto/http/http_err.c',
'openssl/crypto/http/http_lib.c',
'openssl/crypto/idea/i_cbc.c',
'openssl/crypto/idea/i_cfb64.c',
'openssl/crypto/idea/i_ecb.c',
'openssl/crypto/idea/i_ofb64.c',
'openssl/crypto/idea/i_skey.c',
'openssl/crypto/kdf/kdf_err.c',
'openssl/crypto/lhash/lh_stats.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',

'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpt_err.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/cversion.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ebcdic.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/getenv.c',
'openssl/crypto/info.c',
'openssl/crypto/init.c',
'openssl/crypto/initthread.c',
'openssl/crypto/mem.c',
'openssl/crypto/mem_clr.c',
'openssl/crypto/mem_sec.c',
'openssl/crypto/o_dir.c',
'openssl/crypto/o_fopen.c',
'openssl/crypto/o_init.c',
'openssl/crypto/o_str.c',
'openssl/crypto/o_time.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/passphrase.c',
'openssl/crypto/provider.c',
'openssl/crypto/provider_child.c',
'openssl/crypto/provider_conf.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/punycode.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/trace.c',
'openssl/crypto/uid.c',
'openssl/crypto/md4/md4_dgst.c',
'openssl/crypto/md4/md4_one.c',
'openssl/crypto/md5/md5_dgst.c',
'openssl/crypto/md5/md5_one.c',

'openssl/crypto/md5/md5_sha1.c',
'openssl/crypto/mdc2/mdc2_one.c',
'openssl/crypto/mdc2/mdc2dgst.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/cts128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ocb128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/siv128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/objects/o_names.c',
'openssl/crypto/objects/obj_dat.c',
'openssl/crypto/objects/obj_err.c',
'openssl/crypto/objects/obj_lib.c',
'openssl/crypto/objects/obj_xref.c',
'openssl/crypto/ocsp/ocsp_asn.c',
'openssl/crypto/ocsp/ocsp_cl.c',
'openssl/crypto/ocsp/ocsp_err.c',
'openssl/crypto/ocsp/ocsp_ext.c',
'openssl/crypto/ocsp/ocsp_http.c',
'openssl/crypto/ocsp/ocsp_lib.c',
'openssl/crypto/ocsp/ocsp_prn.c',
'openssl/crypto/ocsp/ocsp_srv.c',
'openssl/crypto/ocsp/ocsp_vfy.c',
'openssl/crypto/ocsp/v3_ocsp.c',
'openssl/crypto/pem/pem_all.c',
'openssl/crypto/pem/pem_err.c',
'openssl/crypto/pem/pem_info.c',
'openssl/crypto/pem/pem_lib.c',
'openssl/crypto/pem/pem_oth.c',
'openssl/crypto/pem/pem_pk8.c',
'openssl/crypto/pem/pem_pkey.c',
'openssl/crypto/pem/pem_sign.c',
'openssl/crypto/pem/pem_x509.c',
'openssl/crypto/pem/pem_xaux.c',
'openssl/crypto/pem/pvkfmt.c',
'openssl/crypto/pkcs12/p12_add.c',
'openssl/crypto/pkcs12/p12_asn.c',
'openssl/crypto/pkcs12/p12_attr.c',
'openssl/crypto/pkcs12/p12_crpt.c',
'openssl/crypto/pkcs12/p12_crt.c',
'openssl/crypto/pkcs12/p12_decr.c',
'openssl/crypto/pkcs12/p12_init.c',
'openssl/crypto/pkcs12/p12_key.c',

'openssl/crypto/pkcs12/p12_kiss.c',
'openssl/crypto/pkcs12/p12_mutl.c',
'openssl/crypto/pkcs12/p12_npas.c',
'openssl/crypto/pkcs12/p12_p8d.c',
'openssl/crypto/pkcs12/p12_p8e.c',
'openssl/crypto/pkcs12/p12_sbag.c',
'openssl/crypto/pkcs12/p12_utl.c',
'openssl/crypto/pkcs12/pk12err.c',
'openssl/crypto/pkcs7/bio_pk7.c',
'openssl/crypto/pkcs7/pk7_asn1.c',
'openssl/crypto/pkcs7/pk7_attr.c',
'openssl/crypto/pkcs7/pk7_doit.c',
'openssl/crypto/pkcs7/pk7_lib.c',
'openssl/crypto/pkcs7/pk7_mime.c',
'openssl/crypto/pkcs7/pk7_smime.c',
'openssl/crypto/pkcs7/pkcs7err.c',
'openssl/crypto/poly1305/poly1305.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_err.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/prov_seed.c',
'openssl/crypto/rand/rand_deprecated.c',
'openssl/crypto/rand/rand_err.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rand/rand_meth.c',
'openssl/crypto/rand/rand_pool.c',
'openssl/crypto/rand/randfile.c',
'openssl/crypto/rc2/rc2_cbc.c',
'openssl/crypto/rc2/rc2_ecb.c',
'openssl/crypto/rc2/rc2_skey.c',
'openssl/crypto/rc2/rc2cfb64.c',
'openssl/crypto/rc2/rc2ofb64.c',
'openssl/crypto/rc4/rc4_enc.c',
'openssl/crypto/rc4/rc4_skey.c',
'openssl/crypto/ripemd/rmd_dgst.c',
'openssl/crypto/ripemd/rmd_one.c',
'openssl/crypto/rsa/rsa_ameth.c',
'openssl/crypto/rsa/rsa_asn1.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_depr.c',
'openssl/crypto/rsa/rsa_err.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',

'openssl/crypto/rsa/rsa_meth.c',
'openssl/crypto/rsa/rsa_mp.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',

'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pmeth.c',
'openssl/crypto/rsa/rsa_prn.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_saos.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/rsa/rsa_x931g.c',
'openssl/crypto/seed/seed.c',
'openssl/crypto/seed/seed_cbc.c',
'openssl/crypto/seed/seed_cfb.c',
'openssl/crypto/seed/seed_ecb.c',
'openssl/crypto/seed/seed_ofb.c',
'openssl/crypto/sha/keccak1600.c',
'openssl/crypto/sha/sha1_one.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/siphash/siphash.c',
'openssl/crypto/sm2/sm2_crypt.c',
'openssl/crypto/sm2/sm2_err.c',
'openssl/crypto/sm2/sm2_key.c',
'openssl/crypto/sm2/sm2_sign.c',
'openssl/crypto/sm3/legacy_sm3.c',
'openssl/crypto/sm3/sm3.c',
'openssl/crypto/sm4/sm4.c',
'openssl/crypto/srp/srp_lib.c',
'openssl/crypto/srp/srp_vfy.c',
'openssl/crypto/stack/stack.c',
'openssl/crypto/store/store_err.c',
'openssl/crypto/store/store_init.c',
'openssl/crypto/store/store_lib.c',
'openssl/crypto/store/store_meth.c',
'openssl/crypto/store/store_register.c',
'openssl/crypto/store/store_result.c',
'openssl/crypto/store/store_strings.c',
'openssl/crypto/ts/ts_asn1.c',

'openssl/crypto/ts/ts_conf.c',
'openssl/crypto/ts/ts_err.c',
'openssl/crypto/ts/ts_lib.c',
'openssl/crypto/ts/ts_req_print.c',
'openssl/crypto/ts/ts_req_utils.c',
'openssl/crypto/ts/ts_rsp_print.c',
'openssl/crypto/ts/ts_rsp_sign.c',
'openssl/crypto/ts/ts_rsp_utils.c',
'openssl/crypto/ts/ts_rsp_verify.c',
'openssl/crypto/ts/ts_verify_ctx.c',
'openssl/crypto/txt_db/txt_db.c',
'openssl/crypto/ui/ui_err.c',
'openssl/crypto/ui/ui_lib.c',
'openssl/crypto/ui/ui_null.c',
'openssl/crypto/ui/ui_openssl.c',
'openssl/crypto/ui/ui_util.c',
'openssl/crypto/whrlpool/wp_block.c',
'openssl/crypto/whrlpool/wp_dgst.c',
'openssl/crypto/x509/by_dir.c',
'openssl/crypto/x509/by_file.c',
'openssl/crypto/x509/by_store.c',
'openssl/crypto/x509/pcy_cache.c',
'openssl/crypto/x509/pcy_data.c',
'openssl/crypto/x509/pcy_lib.c',
'openssl/crypto/x509/pcy_map.c',
'openssl/crypto/x509/pcy_node.c',
'openssl/crypto/x509/pcy_tree.c',
'openssl/crypto/x509/t_crl.c',
'openssl/crypto/x509/t_req.c',
'openssl/crypto/x509/t_x509.c',
'openssl/crypto/x509/v3_addr.c',
'openssl/crypto/x509/v3_admis.c',
'openssl/crypto/x509/v3_akeya.c',
'openssl/crypto/x509/v3_akid.c',
'openssl/crypto/x509/v3_asid.c',
'openssl/crypto/x509/v3_bcons.c',
'openssl/crypto/x509/v3_bitst.c',
'openssl/crypto/x509/v3_conf.c',
'openssl/crypto/x509/v3_cpols.c',
'openssl/crypto/x509/v3_crld.c',
'openssl/crypto/x509/v3_enum.c',
'openssl/crypto/x509/v3_extku.c',
'openssl/crypto/x509/v3_genn.c',
'openssl/crypto/x509/v3_ia5.c',
'openssl/crypto/x509/v3_info.c',
'openssl/crypto/x509/v3_int.c',
'openssl/crypto/x509/v3_ist.c',
'openssl/crypto/x509/v3_lib.c',

'openssl/crypto/x509/v3_ncons.c',
'openssl/crypto/x509/v3_pci.c',
'openssl/crypto/x509/v3_pcia.c',
'openssl/crypto/x509/v3_pcons.c',
'openssl/crypto/x509/v3_pku.c',
'openssl/crypto/x509/v3_pmaps.c',
'openssl/crypto/x509/v3_prn.c',
'openssl/crypto/x509/v3_purp.c',
'openssl/crypto/x509/v3_san.c',
'openssl/crypto/x509/v3_skid.c',
'openssl/crypto/x509/v3_sxnet.c',
'openssl/crypto/x509/v3_tlsf.c',
'openssl/crypto/x509/v3_utf8.c',
'openssl/crypto/x509/v3_utl.c',
'openssl/crypto/x509/v3err.c',
'openssl/crypto/x509/x509_att.c',
'openssl/crypto/x509/x509_cmp.c',
'openssl/crypto/x509/x509_d2.c',
'openssl/crypto/x509/x509_def.c',
'openssl/crypto/x509/x509_err.c',
'openssl/crypto/x509/x509_ext.c',
'openssl/crypto/x509/x509_lu.c',
'openssl/crypto/x509/x509_meth.c',
'openssl/crypto/x509/x509_obj.c',
'openssl/crypto/x509/x509_r2x.c',
'openssl/crypto/x509/x509_req.c',
'openssl/crypto/x509/x509_set.c',
'openssl/crypto/x509/x509_trust.c',
'openssl/crypto/x509/x509_txt.c',
'openssl/crypto/x509/x509_v3.c',
'openssl/crypto/x509/x509_vfy.c',
'openssl/crypto/x509/x509_vpm.c',
'openssl/crypto/x509/x509cset.c',
'openssl/crypto/x509/x509name.c',
'openssl/crypto/x509/x509rset.c',
'openssl/crypto/x509/x509spki.c',
'openssl/crypto/x509/x509type.c',
'openssl/crypto/x509/x_all.c',
'openssl/crypto/x509/x_attrib.c',
'openssl/crypto/x509/x_crl.c',
'openssl/crypto/x509/x_exten.c',
'openssl/crypto/x509/x_name.c',
'openssl/crypto/x509/x_pubkey.c',
'openssl/crypto/x509/x_req.c',
'openssl/crypto/x509/x_x509.c',
'openssl/crypto/x509/x_x509a.c',
'openssl/engines/e_capi.c',
'openssl/engines/e_devcrypto.c',

'openssl/engines/e_padlock.c',
'openssl/providers/baseprov.c',
'openssl/providers/defltprov.c',
'openssl/providers/nullprov.c',
'openssl/providers/prov_running.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/der/der_sm2_key.c',
'openssl/providers/common/der/der_sm2_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_default.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/asymciphers/sm2_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_hw.c',
'openssl/providers/implementations/ciphers/cipher_camellia.c',
'openssl/providers/implementations/ciphers/cipher_camellia_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_null.c',

'openssl/providers/implementations/ciphers/cipher_sm4.c',
'openssl/providers/implementations/ciphers/cipher_sm4_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',

'openssl/providers/implementations/ciphers/cipher_tdes_wrap.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap_hw.c',
'openssl/providers/implementations/digests/blake2_prov.c',
'openssl/providers/implementations/digests/blake2b_prov.c',
'openssl/providers/implementations/digests/blake2s_prov.c',
'openssl/providers/implementations/digests/md5_prov.c',
'openssl/providers/implementations/digests/md5_sha1_prov.c',
'openssl/providers/implementations/digests/null_prov.c',
'openssl/providers/implementations/digests/ripemd_prov.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/digests/sm3_prov.c',
'openssl/providers/implementations/encode_decode/decode_der2key.c',
'openssl/providers/implementations/encode_decode/decode_epki2pki.c',
'openssl/providers/implementations/encode_decode/decode_msblob2key.c',
'openssl/providers/implementations/encode_decode/decode_pem2der.c',
'openssl/providers/implementations/encode_decode/decode_pvk2key.c',
'openssl/providers/implementations/encode_decode/decode_spki2typespki.c',
'openssl/providers/implementations/encode_decode/encode_key2any.c',
'openssl/providers/implementations/encode_decode/encode_key2blob.c',
'openssl/providers/implementations/encode_decode/encode_key2ms.c',
'openssl/providers/implementations/encode_decode/encode_key2text.c',
'openssl/providers/implementations/encode_decode/endecoder_common.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/krb5kdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/pkcs12kdf.c',
'openssl/providers/implementations/kdfs/scrypt.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',

'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/blake2b_mac.c',
'openssl/providers/implementations/macs/blake2s_mac.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/macs/poly1305_prov.c',
'openssl/providers/implementations/macs/siphash_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/seed_src.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/rands/seeding/rand_cpu_x86.c',
'openssl/providers/implementations/rands/seeding/rand_tsc.c',
'openssl/providers/implementations/rands/seeding/rand_unix.c',
'openssl/providers/implementations/rands/seeding/rand_win.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',
'openssl/providers/implementations/signature/sm2_sig.c',
'openssl/providers/implementations/storemgmt/file_store.c',
'openssl/providers/implementations/storemgmt/file_store_any2obj.c',
'openssl/ssl/s3_cbc.c',
'openssl/providers/common/der/der_dsa_key.c',
'openssl/providers/common/der/der_dsa_sig.c',
'openssl/providers/common/der/der_ec_key.c',
'openssl/providers/common/der/der_ec_sig.c',
'openssl/providers/common/der/der_ecx_key.c',
'openssl/providers/common/der/der_rsa_key.c',
'openssl/providers/common/provider_ctx.c',
'openssl/providers/common/provider_err.c',
'openssl/providers/implementations/ciphers/ciphercommon.c',
'openssl/providers/implementations/ciphers/ciphercommon_block.c',
'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',

```
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish_hw.c',
  'openssl/providers/implementations/ciphers/cipher_cast5.c',
  'openssl/providers/implementations/ciphers/cipher_cast5_hw.c',
   'openssl/providers/implementations/ciphers/cipher_des.c',
  'openssl/providers/implementations/ciphers/cipher_des_hw.c',
  'openssl/providers/implementations/ciphers/cipher_desx.c',
  'openssl/providers/implementations/ciphers/cipher_desx_hw.c',
  'openssl/providers/implementations/ciphers/cipher_idea.c',
  'openssl/providers/implementations/ciphers/cipher_idea_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc2.c',
  'openssl/providers/implementations/ciphers/cipher_rc2_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hw.c',
  'openssl/providers/implementations/ciphers/cipher_seed.c',
  'openssl/providers/implementations/ciphers/cipher_seed_hw.c',
  'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
   'openssl/providers/implementations/digests/md4_prov.c',
  'openssl/providers/implementations/digests/mdc2_prov.c',
  'openssl/providers/implementations/digests/ripemd_prov.c',
  'openssl/providers/implementations/digests/wp_prov.c',
  'openssl/providers/implementations/kdfs/pbkdf1.c',
  'openssl/providers/prov_running.c',
  'openssl/providers/legacyprov.c',
],
'openssl_sources_BSD-x86_64': [
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_wrap_gen.c',
   './config/archs/BSD-x86_64/no-asm/providers/legacy.ld',
  './config/archs/BSD-x86_64/no-asm/providers/fips.ld',
],
'openssl_defines_BSD-x86_64': [
  'NDEBUG',
  'L_ENDIAN',
  'OPENSSL_BUILDING_OPENSSL',
  'OPENSSL_PIC',
],
'openssl_cflags_BSD-x86_64': [
```

```
    '-Wall -O3',
    '-pthread',
    '-Wall -O3',
  ],
  'openssl_ex_libs_BSD-x86_64': [
    '-pthread',
  ],
 },
 'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86_64)'],
 'cflags' : ['<@(openssl_cflags_BSD-x86_64)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],
 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86_64)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86_64)'],
 },
}
/*
* WARNING: do not edit!
* Generated by Makefile from providers/common/include/prov/der_wrap.h.in
*
* Copyright 2020-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#include "internal/der.h"

/* Well known OIDs precompiled */

/*
* id-alg-CMS3DESwrap OBJECT IDENTIFIER ::= {
*     iso(1) member-body(2) us(840) rsadsi(113549) pkcs(1) pkcs-9(9) smime(16) alg(3) 6
* }
*/
#define DER_OID_V_id_alg_CMS3DESwrap DER_P_OBJECT, 11, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01,
0x09, 0x10, 0x03, 0x06
#define DER_OID_SZ_id_alg_CMS3DESwrap 13
```

extern const unsigned char ossl_der_oid_id_alg_CMS3DESwrap[DER_OID_SZ_id_alg_CMS3DESwrap];

/*
* id-aes128-wrap OBJECT IDENTIFIER ::= { aes 5 }
*/
#define DER_OID_V_id_aes128_wrap DER_P_OBJECT,
9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x01, 0x05
#define DER_OID_SZ_id_aes128_wrap 11
extern const unsigned char ossl_der_oid_id_aes128_wrap[DER_OID_SZ_id_aes128_wrap];

/*
* id-aes192-wrap OBJECT IDENTIFIER ::= { aes 25 }
*/
#define DER_OID_V_id_aes192_wrap DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x01, 0x19
#define DER_OID_SZ_id_aes192_wrap 11
extern const unsigned char ossl_der_oid_id_aes192_wrap[DER_OID_SZ_id_aes192_wrap];

/*
* id-aes256-wrap OBJECT IDENTIFIER ::= { aes 45 }
*/
#define DER_OID_V_id_aes256_wrap DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x01,
0x2D
#define DER_OID_SZ_id_aes256_wrap 11
extern const unsigned char ossl_der_oid_id_aes256_wrap[DER_OID_SZ_id_aes256_wrap];
(The MIT License)

Copyright (c) 2012-2014 Federico Romero
Copyright (c) 2012-2014 Isaac Z. Schlueter
Copyright (c) 2014-2015 Douglas Christopher Wilson

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
'Software'), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED 'AS IS', WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES
OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE

SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
{
 'variables': {
  'openssl_sources': [
    'openssl/ssl/bio_ssl.c',
    'openssl/ssl/d1_lib.c',
    'openssl/ssl/d1_msg.c',
    'openssl/ssl/d1_srtp.c',
    'openssl/ssl/methods.c',
    'openssl/ssl/pqueue.c',
    'openssl/ssl/s3_enc.c',
    'openssl/ssl/s3_lib.c',
    'openssl/ssl/s3_msg.c',
    'openssl/ssl/ssl_asn1.c',
    'openssl/ssl/ssl_cert.c',
    'openssl/ssl/ssl_ciph.c',
    'openssl/ssl/ssl_conf.c',
    'openssl/ssl/ssl_err.c',
    'openssl/ssl/ssl_err_legacy.c',
    'openssl/ssl/ssl_init.c',
    'openssl/ssl/ssl_lib.c',
    'openssl/ssl/ssl_mcnf.c',
    'openssl/ssl/ssl_rsa.c',
    'openssl/ssl/ssl_rsa_legacy.c',
    'openssl/ssl/ssl_sess.c',
    'openssl/ssl/ssl_stat.c',
    'openssl/ssl/ssl_txt.c',
    'openssl/ssl/ssl_utst.c',
    'openssl/ssl/t1_enc.c',
    'openssl/ssl/t1_lib.c',
    'openssl/ssl/t1_trce.c',
    'openssl/ssl/tls13_enc.c',
    'openssl/ssl/tls_depr.c',
    'openssl/ssl/tls_srp.c',
    'openssl/ssl/record/dtls1_bitmap.c',
     'openssl/ssl/record/rec_layer_d1.c',
    'openssl/ssl/record/rec_layer_s3.c',
    'openssl/ssl/record/ssl3_buffer.c',
    'openssl/ssl/record/ssl3_record.c',
    'openssl/ssl/record/ssl3_record_tls13.c',
    'openssl/ssl/statem/extensions.c',
    'openssl/ssl/statem/extensions_clnt.c',
    'openssl/ssl/statem/extensions_cust.c',
    'openssl/ssl/statem/extensions_srvr.c',
    'openssl/ssl/statem/statem.c',
    'openssl/ssl/statem/statem_clnt.c',
    'openssl/ssl/statem/statem_dtls.c',
    'openssl/ssl/statem/statem_lib.c',
```

'openssl/ssl/statem/statem_srvr.c',
'openssl/crypto/aes/aes_cfb.c',
'openssl/crypto/aes/aes_ecb.c',
'openssl/crypto/aes/aes_ige.c',
'openssl/crypto/aes/aes_misc.c',
'openssl/crypto/aes/aes_ofb.c',
'openssl/crypto/aes/aes_wrap.c',
'openssl/crypto/aria/aria.c',
'openssl/crypto/asn1/a_bitstr.c',
'openssl/crypto/asn1/a_d2i_fp.c',
'openssl/crypto/asn1/a_digest.c',
'openssl/crypto/asn1/a_dup.c',
'openssl/crypto/asn1/a_gentm.c',
'openssl/crypto/asn1/a_i2d_fp.c',
'openssl/crypto/asn1/a_int.c',
'openssl/crypto/asn1/a_mbstr.c',
'openssl/crypto/asn1/a_object.c',
'openssl/crypto/asn1/a_octet.c',
'openssl/crypto/asn1/a_print.c',
'openssl/crypto/asn1/a_sign.c',
'openssl/crypto/asn1/a_strex.c',
'openssl/crypto/asn1/a_strnid.c',
'openssl/crypto/asn1/a_time.c',
'openssl/crypto/asn1/a_type.c',
'openssl/crypto/asn1/a_utctm.c',
'openssl/crypto/asn1/a_utf8.c',
'openssl/crypto/asn1/a_verify.c',
'openssl/crypto/asn1/ameth_lib.c',
'openssl/crypto/asn1/asn1_err.c',
'openssl/crypto/asn1/asn1_gen.c',
'openssl/crypto/asn1/asn1_item_list.c',
'openssl/crypto/asn1/asn1_lib.c',
'openssl/crypto/asn1/asn1_parse.c',
'openssl/crypto/asn1/asn_mime.c',
'openssl/crypto/asn1/asn_moid.c',
'openssl/crypto/asn1/asn_mstbl.c',
'openssl/crypto/asn1/asn_pack.c',
'openssl/crypto/asn1/bio_asn1.c',
'openssl/crypto/asn1/bio_ndef.c',
'openssl/crypto/asn1/d2i_param.c',
'openssl/crypto/asn1/d2i_pr.c',
'openssl/crypto/asn1/d2i_pu.c',
'openssl/crypto/asn1/evp_asn1.c',
'openssl/crypto/asn1/f_int.c',
'openssl/crypto/asn1/f_string.c',
'openssl/crypto/asn1/i2d_evp.c',
'openssl/crypto/asn1/n_pkey.c',
'openssl/crypto/asn1/nsseq.c',

'openssl/crypto/asn1/p5_pbe.c',
'openssl/crypto/asn1/p5_pbev2.c',
'openssl/crypto/asn1/p5_scrypt.c',
'openssl/crypto/asn1/p8_pkey.c',
'openssl/crypto/asn1/t_bitst.c',
'openssl/crypto/asn1/t_pkey.c',
'openssl/crypto/asn1/t_spki.c',
'openssl/crypto/asn1/tasn_dec.c',
'openssl/crypto/asn1/tasn_enc.c',
'openssl/crypto/asn1/tasn_fre.c',
'openssl/crypto/asn1/tasn_new.c',
'openssl/crypto/asn1/tasn_prn.c',
'openssl/crypto/asn1/tasn_scn.c',
'openssl/crypto/asn1/tasn_typ.c',
'openssl/crypto/asn1/tasn_utl.c',
'openssl/crypto/asn1/x_algor.c',
'openssl/crypto/asn1/x_bignum.c',
'openssl/crypto/asn1/x_info.c',
'openssl/crypto/asn1/x_int64.c',
'openssl/crypto/asn1/x_long.c',
'openssl/crypto/asn1/x_pkey.c',
'openssl/crypto/asn1/x_sig.c',
'openssl/crypto/asn1/x_spki.c',
'openssl/crypto/asn1/x_val.c',
'openssl/crypto/async/arch/async_null.c',
'openssl/crypto/async/arch/async_posix.c',
'openssl/crypto/async/arch/async_win.c',
'openssl/crypto/async/async.c',
'openssl/crypto/async/async_err.c',
'openssl/crypto/async/async_wait.c',
'openssl/crypto/bf/bf_cfb64.c',
'openssl/crypto/bf/bf_ecb.c',
'openssl/crypto/bf/bf_ofb64.c',
'openssl/crypto/bf/bf_skey.c',
'openssl/crypto/bio/bf_buff.c',
'openssl/crypto/bio/bf_lbuf.c',
'openssl/crypto/bio/bf_nbio.c',
'openssl/crypto/bio/bf_null.c',
'openssl/crypto/bio/bf_prefix.c',
'openssl/crypto/bio/bf_readbuff.c',
'openssl/crypto/bio/bio_addr.c',
'openssl/crypto/bio/bio_cb.c',
'openssl/crypto/bio/bio_dump.c',
'openssl/crypto/bio/bio_err.c',
'openssl/crypto/bio/bio_lib.c',
'openssl/crypto/bio/bio_meth.c',
'openssl/crypto/bio/bio_print.c',
'openssl/crypto/bio/bio_sock.c',

```
  'openssl/crypto/bio/bio_sock2.c',
  'openssl/crypto/bio/bss_acpt.c',
  'openssl/crypto/bio/bss_bio.c',
  'openssl/crypto/bio/bss_conn.c',
  'openssl/crypto/bio/bss_core.c',
  'openssl/crypto/bio/bss_dgram.c',
  'openssl/crypto/bio/bss_fd.c',
  'openssl/crypto/bio/bss_file.c',
  'openssl/crypto/bio/bss_log.c',
  'openssl/crypto/bio/bss_mem.c',
  'openssl/crypto/bio/bss_null.c',
  'openssl/crypto/bio/bss_sock.c',
  'openssl/crypto/bio/ossl_core_bio.c',
  'openssl/crypto/bn/bn_add.c',
  'openssl/crypto/bn/bn_blind.c',
  'openssl/crypto/bn/bn_const.c',

 'openssl/crypto/bn/bn_conv.c',
  'openssl/crypto/bn/bn_ctx.c',
  'openssl/crypto/bn/bn_depr.c',
  'openssl/crypto/bn/bn_dh.c',
  'openssl/crypto/bn/bn_div.c',
  'openssl/crypto/bn/bn_err.c',
  'openssl/crypto/bn/bn_exp.c',
  'openssl/crypto/bn/bn_exp2.c',
  'openssl/crypto/bn/bn_gcd.c',
  'openssl/crypto/bn/bn_gf2m.c',
  'openssl/crypto/bn/bn_intern.c',
  'openssl/crypto/bn/bn_kron.c',
  'openssl/crypto/bn/bn_lib.c',
  'openssl/crypto/bn/bn_mod.c',
  'openssl/crypto/bn/bn_mont.c',
  'openssl/crypto/bn/bn_mpi.c',
  'openssl/crypto/bn/bn_mul.c',
  'openssl/crypto/bn/bn_nist.c',
  'openssl/crypto/bn/bn_prime.c',
  'openssl/crypto/bn/bn_print.c',
  'openssl/crypto/bn/bn_rand.c',
  'openssl/crypto/bn/bn_recp.c',
  'openssl/crypto/bn/bn_rsa_fips186_4.c',
  'openssl/crypto/bn/bn_shift.c',
  'openssl/crypto/bn/bn_sqr.c',
  'openssl/crypto/bn/bn_sqrt.c',
  'openssl/crypto/bn/bn_srp.c',

 'openssl/crypto/bn/bn_word.c',
  'openssl/crypto/bn/bn_x931p.c',
  'openssl/crypto/buffer/buf_err.c',
```

'openssl/crypto/buffer/buffer.c',
'openssl/crypto/camellia/cmll_cfb.c',
'openssl/crypto/camellia/cmll_ctr.c',
'openssl/crypto/camellia/cmll_ecb.c',
'openssl/crypto/camellia/cmll_ofb.c',
'openssl/crypto/cast/c_cfb64.c',
'openssl/crypto/cast/c_ecb.c',
'openssl/crypto/cast/c_enc.c',
'openssl/crypto/cast/c_ofb64.c',
'openssl/crypto/cast/c_skey.c',
'openssl/crypto/cmac/cmac.c',
'openssl/crypto/cmp/cmp_asn.c',
'openssl/crypto/cmp/cmp_client.c',
'openssl/crypto/cmp/cmp_ctx.c',
'openssl/crypto/cmp/cmp_err.c',
'openssl/crypto/cmp/cmp_hdr.c',
'openssl/crypto/cmp/cmp_http.c',
'openssl/crypto/cmp/cmp_msg.c',
'openssl/crypto/cmp/cmp_protect.c',
'openssl/crypto/cmp/cmp_server.c',
'openssl/crypto/cmp/cmp_status.c',
'openssl/crypto/cmp/cmp_util.c',
'openssl/crypto/cmp/cmp_vfy.c',
'openssl/crypto/cms/cms_asn1.c',
'openssl/crypto/cms/cms_att.c',
'openssl/crypto/cms/cms_cd.c',
'openssl/crypto/cms/cms_dd.c',
'openssl/crypto/cms/cms_dh.c',
'openssl/crypto/cms/cms_ec.c',
'openssl/crypto/cms/cms_enc.c',
'openssl/crypto/cms/cms_env.c',
'openssl/crypto/cms/cms_err.c',
'openssl/crypto/cms/cms_ess.c',
'openssl/crypto/cms/cms_io.c',
'openssl/crypto/cms/cms_kari.c',
'openssl/crypto/cms/cms_lib.c',
'openssl/crypto/cms/cms_pwri.c',
'openssl/crypto/cms/cms_rsa.c',
'openssl/crypto/cms/cms_sd.c',
'openssl/crypto/cms/cms_smime.c',
'openssl/crypto/conf/conf_api.c',
'openssl/crypto/conf/conf_def.c',
'openssl/crypto/conf/conf_err.c',
'openssl/crypto/conf/conf_lib.c',
'openssl/crypto/conf/conf_mall.c',
'openssl/crypto/conf/conf_mod.c',
'openssl/crypto/conf/conf_sap.c',
'openssl/crypto/conf/conf_ssl.c',

'openssl/crypto/crmf/crmf_asn.c',
'openssl/crypto/crmf/crmf_err.c',
'openssl/crypto/crmf/crmf_lib.c',
'openssl/crypto/crmf/crmf_pbm.c',
'openssl/crypto/ct/ct_b64.c',
'openssl/crypto/ct/ct_err.c',
'openssl/crypto/ct/ct_log.c',
'openssl/crypto/ct/ct_oct.c',
'openssl/crypto/ct/ct_policy.c',
'openssl/crypto/ct/ct_prn.c',
'openssl/crypto/ct/ct_sct.c',
'openssl/crypto/ct/ct_sct_ctx.c',
'openssl/crypto/ct/ct_vfy.c',
'openssl/crypto/ct/ct_x509v3.c',
'openssl/crypto/des/cbc_cksm.c',
'openssl/crypto/des/cbc_enc.c',
'openssl/crypto/des/cfb64ede.c',
'openssl/crypto/des/cfb64enc.c',
'openssl/crypto/des/cfb_enc.c',
'openssl/crypto/des/ecb3_enc.c',
'openssl/crypto/des/ecb_enc.c',
'openssl/crypto/des/fcrypt.c',
'openssl/crypto/des/ofb64ede.c',
'openssl/crypto/des/ofb64enc.c',
'openssl/crypto/des/ofb_enc.c',
'openssl/crypto/des/pcbc_enc.c',
'openssl/crypto/des/qud_cksm.c',
'openssl/crypto/des/rand_key.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/des/str2key.c',
'openssl/crypto/des/xcbc_enc.c',
'openssl/crypto/dh/dh_ameth.c',
'openssl/crypto/dh/dh_asn1.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_depr.c',
'openssl/crypto/dh/dh_err.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dh/dh_meth.c',
'openssl/crypto/dh/dh_pmeth.c',
'openssl/crypto/dh/dh_prn.c',
'openssl/crypto/dh/dh_rfc5114.c',
'openssl/crypto/dsa/dsa_ameth.c',
'openssl/crypto/dsa/dsa_asn1.c',

'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_depr.c',
'openssl/crypto/dsa/dsa_err.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_meth.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_pmeth.c',
'openssl/crypto/dsa/dsa_prn.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/dso/dso_dl.c',
'openssl/crypto/dso/dso_dlfcn.c',
'openssl/crypto/dso/dso_err.c',
'openssl/crypto/dso/dso_lib.c',
'openssl/crypto/dso/dso_openssl.c',
'openssl/crypto/dso/dso_vms.c',
'openssl/crypto/dso/dso_win32.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_ameth.c',
'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_deprecated.c',
'openssl/crypto/ec/ec_err.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ec_pmeth.c',
'openssl/crypto/ec/ec_print.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',

'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/eck_prn.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_nistz256.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/ec/ecx_meth.c',
'openssl/crypto/encode_decode/decoder_err.c',
'openssl/crypto/encode_decode/decoder_lib.c',
'openssl/crypto/encode_decode/decoder_meth.c',
'openssl/crypto/encode_decode/decoder_pkey.c',
'openssl/crypto/encode_decode/encoder_err.c',
'openssl/crypto/encode_decode/encoder_lib.c',
'openssl/crypto/encode_decode/encoder_meth.c',
'openssl/crypto/encode_decode/encoder_pkey.c',
'openssl/crypto/engine/eng_all.c',
'openssl/crypto/engine/eng_cnf.c',
'openssl/crypto/engine/eng_ctrl.c',
'openssl/crypto/engine/eng_dyn.c',
'openssl/crypto/engine/eng_err.c',
'openssl/crypto/engine/eng_fat.c',
'openssl/crypto/engine/eng_init.c',
'openssl/crypto/engine/eng_lib.c',
'openssl/crypto/engine/eng_list.c',
'openssl/crypto/engine/eng_openssl.c',
'openssl/crypto/engine/eng_pkey.c',
'openssl/crypto/engine/eng_rdrand.c',
'openssl/crypto/engine/eng_table.c',
'openssl/crypto/engine/tb_asnmth.c',
'openssl/crypto/engine/tb_cipher.c',
'openssl/crypto/engine/tb_dh.c',
'openssl/crypto/engine/tb_digest.c',
'openssl/crypto/engine/tb_dsa.c',
'openssl/crypto/engine/tb_eckey.c',
'openssl/crypto/engine/tb_pkmeth.c',
'openssl/crypto/engine/tb_rand.c',
'openssl/crypto/engine/tb_rsa.c',
'openssl/crypto/err/err.c',
'openssl/crypto/err/err_all.c',
'openssl/crypto/err/err_all_legacy.c',
'openssl/crypto/err/err_blocks.c',
'openssl/crypto/err/err_prn.c',
'openssl/crypto/ess/ess_asn1.c',
'openssl/crypto/ess/ess_err.c',

'openssl/crypto/ess/ess_lib.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/bio_b64.c',
'openssl/crypto/evp/bio_enc.c',
'openssl/crypto/evp/bio_md.c',
'openssl/crypto/evp/bio_ok.c',
'openssl/crypto/evp/c_allc.c',
'openssl/crypto/evp/c_alld.c',
'openssl/crypto/evp/cmeth_lib.c',
'openssl/crypto/evp/ctrl_params_translate.c',
'openssl/crypto/evp/dh_ctrl.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/dsa_ctrl.c',
'openssl/crypto/evp/e_aes.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha1.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha256.c',
'openssl/crypto/evp/e_aria.c',
'openssl/crypto/evp/e_bf.c',
'openssl/crypto/evp/e_camellia.c',
'openssl/crypto/evp/e_cast.c',
'openssl/crypto/evp/e_chacha20_poly1305.c',
'openssl/crypto/evp/e_des.c',
'openssl/crypto/evp/e_des3.c',
'openssl/crypto/evp/e_idea.c',
'openssl/crypto/evp/e_null.c',
'openssl/crypto/evp/e_old.c',
'openssl/crypto/evp/e_rc2.c',
'openssl/crypto/evp/e_rc4.c',
'openssl/crypto/evp/e_rc4_hmac_md5.c',
'openssl/crypto/evp/e_rc5.c',
'openssl/crypto/evp/e_seed.c',
'openssl/crypto/evp/e_sm4.c',
'openssl/crypto/evp/e_xcbc_d.c',
'openssl/crypto/evp/ec_ctrl.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/encode.c',
'openssl/crypto/evp/evp_cnf.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_err.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_key.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_pbe.c',
'openssl/crypto/evp/evp_pkey.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',

'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/legacy_blake2.c',
'openssl/crypto/evp/legacy_md4.c',
'openssl/crypto/evp/legacy_md5.c',
'openssl/crypto/evp/legacy_md5_sha1.c',
'openssl/crypto/evp/legacy_mdc2.c',
'openssl/crypto/evp/legacy_ripemd.c',
'openssl/crypto/evp/legacy_sha.c',
'openssl/crypto/evp/legacy_wp.c',
'openssl/crypto/evp/m_null.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/names.c',
'openssl/crypto/evp/p5_crpt.c',
'openssl/crypto/evp/p5_crpt2.c',
'openssl/crypto/evp/p_dec.c',
'openssl/crypto/evp/p_enc.c',
'openssl/crypto/evp/p_legacy.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/p_open.c',
'openssl/crypto/evp/p_seal.c',
'openssl/crypto/evp/p_sign.c',
'openssl/crypto/evp/p_verify.c',
'openssl/crypto/evp/pbe_scrypt.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/http/http_client.c',
'openssl/crypto/http/http_err.c',
'openssl/crypto/http/http_lib.c',
'openssl/crypto/idea/i_cbc.c',
'openssl/crypto/idea/i_cfb64.c',
'openssl/crypto/idea/i_ecb.c',
'openssl/crypto/idea/i_ofb64.c',

```
    'openssl/crypto/idea/i_skey.c',
    'openssl/crypto/kdf/kdf_err.c',
    'openssl/crypto/lhash/lh_stats.c',
    'openssl/crypto/lhash/lhash.c',
    'openssl/crypto/asn1_dsa.c',
    'openssl/crypto/bsearch.c',
    'openssl/crypto/context.c',
    'openssl/crypto/core_algorithm.c',
    'openssl/crypto/core_fetch.c',
    'openssl/crypto/core_namemap.c',
    'openssl/crypto/cpt_err.c',

  'openssl/crypto/cpuid.c',
    'openssl/crypto/cryptlib.c',
    'openssl/crypto/ctype.c',
    'openssl/crypto/cversion.c',
    'openssl/crypto/der_writer.c',
    'openssl/crypto/ebcdic.c',
    'openssl/crypto/ex_data.c',
    'openssl/crypto/getenv.c',
    'openssl/crypto/info.c',
    'openssl/crypto/init.c',
    'openssl/crypto/initthread.c',
    'openssl/crypto/mem.c',
    'openssl/crypto/mem_sec.c',
    'openssl/crypto/o_dir.c',
    'openssl/crypto/o_fopen.c',
    'openssl/crypto/o_init.c',
    'openssl/crypto/o_str.c',
    'openssl/crypto/o_time.c',
    'openssl/crypto/packet.c',
    'openssl/crypto/param_build.c',
    'openssl/crypto/param_build_set.c',
    'openssl/crypto/params.c',
    'openssl/crypto/params_dup.c',
    'openssl/crypto/params_from_text.c',
    'openssl/crypto/passphrase.c',
    'openssl/crypto/provider.c',
    'openssl/crypto/provider_child.c',
    'openssl/crypto/provider_conf.c',
    'openssl/crypto/provider_core.c',
     'openssl/crypto/provider_predefined.c',
    'openssl/crypto/punycode.c',
    'openssl/crypto/self_test_core.c',
    'openssl/crypto/sparse_array.c',
    'openssl/crypto/threads_lib.c',
    'openssl/crypto/threads_none.c',
    'openssl/crypto/threads_pthread.c',
```

'openssl/crypto/threads_win.c',
'openssl/crypto/trace.c',
'openssl/crypto/uid.c',
'openssl/crypto/md4/md4_dgst.c',
'openssl/crypto/md4/md4_one.c',
'openssl/crypto/md5/md5_dgst.c',
'openssl/crypto/md5/md5_one.c',
'openssl/crypto/md5/md5_sha1.c',
'openssl/crypto/mdc2/mdc2_one.c',
'openssl/crypto/mdc2/mdc2dgst.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/cts128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ocb128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/siv128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/objects/o_names.c',
'openssl/crypto/objects/obj_dat.c',
'openssl/crypto/objects/obj_err.c',
'openssl/crypto/objects/obj_lib.c',
'openssl/crypto/objects/obj_xref.c',
'openssl/crypto/ocsp/ocsp_asn.c',
'openssl/crypto/ocsp/ocsp_cl.c',
'openssl/crypto/ocsp/ocsp_err.c',
'openssl/crypto/ocsp/ocsp_ext.c',
'openssl/crypto/ocsp/ocsp_http.c',
'openssl/crypto/ocsp/ocsp_lib.c',
'openssl/crypto/ocsp/ocsp_prn.c',
'openssl/crypto/ocsp/ocsp_srv.c',
'openssl/crypto/ocsp/ocsp_vfy.c',
'openssl/crypto/ocsp/v3_ocsp.c',
'openssl/crypto/pem/pem_all.c',
'openssl/crypto/pem/pem_err.c',
'openssl/crypto/pem/pem_info.c',
'openssl/crypto/pem/pem_lib.c',
'openssl/crypto/pem/pem_oth.c',
'openssl/crypto/pem/pem_pk8.c',
'openssl/crypto/pem/pem_pkey.c',
'openssl/crypto/pem/pem_sign.c',
'openssl/crypto/pem/pem_x509.c',
'openssl/crypto/pem/pem_xaux.c',
'openssl/crypto/pem/pvkfmt.c',
'openssl/crypto/pkcs12/p12_add.c',

'openssl/crypto/pkcs12/p12_asn.c',
'openssl/crypto/pkcs12/p12_attr.c',
'openssl/crypto/pkcs12/p12_crpt.c',
'openssl/crypto/pkcs12/p12_crt.c',
'openssl/crypto/pkcs12/p12_decr.c',
'openssl/crypto/pkcs12/p12_init.c',
'openssl/crypto/pkcs12/p12_key.c',
'openssl/crypto/pkcs12/p12_kiss.c',
'openssl/crypto/pkcs12/p12_mutl.c',
'openssl/crypto/pkcs12/p12_npas.c',
'openssl/crypto/pkcs12/p12_p8d.c',
'openssl/crypto/pkcs12/p12_p8e.c',
'openssl/crypto/pkcs12/p12_sbag.c',
'openssl/crypto/pkcs12/p12_utl.c',
'openssl/crypto/pkcs12/pk12err.c',
'openssl/crypto/pkcs7/bio_pk7.c',
'openssl/crypto/pkcs7/pk7_asn1.c',
'openssl/crypto/pkcs7/pk7_attr.c',
'openssl/crypto/pkcs7/pk7_doit.c',
'openssl/crypto/pkcs7/pk7_lib.c',
'openssl/crypto/pkcs7/pk7_mime.c',
'openssl/crypto/pkcs7/pk7_smime.c',
'openssl/crypto/pkcs7/pkcs7err.c',
'openssl/crypto/poly1305/poly1305.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_err.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/prov_seed.c',
'openssl/crypto/rand/rand_deprecated.c',
'openssl/crypto/rand/rand_err.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rand/rand_meth.c',
'openssl/crypto/rand/rand_pool.c',
'openssl/crypto/rand/randfile.c',
'openssl/crypto/rc2/rc2_cbc.c',
'openssl/crypto/rc2/rc2_ecb.c',
'openssl/crypto/rc2/rc2_skey.c',
'openssl/crypto/rc2/rc2cfb64.c',
'openssl/crypto/rc2/rc2ofb64.c',
'openssl/crypto/ripemd/rmd_dgst.c',
'openssl/crypto/ripemd/rmd_one.c',
'openssl/crypto/rsa/rsa_ameth.c',
'openssl/crypto/rsa/rsa_asn1.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',

'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_depr.c',
'openssl/crypto/rsa/rsa_err.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_meth.c',
'openssl/crypto/rsa/rsa_mp.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pmeth.c',
'openssl/crypto/rsa/rsa_prn.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_saos.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/rsa/rsa_x931g.c',
'openssl/crypto/seed/seed.c',
'openssl/crypto/seed/seed_cbc.c',
'openssl/crypto/seed/seed_cfb.c',
'openssl/crypto/seed/seed_ecb.c',
'openssl/crypto/seed/seed_ofb.c',
'openssl/crypto/sha/keccak1600.c',
'openssl/crypto/sha/sha1_one.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/siphash/siphash.c',
'openssl/crypto/sm2/sm2_crypt.c',
'openssl/crypto/sm2/sm2_err.c',
'openssl/crypto/sm2/sm2_key.c',
'openssl/crypto/sm2/sm2_sign.c',
'openssl/crypto/sm3/legacy_sm3.c',
'openssl/crypto/sm3/sm3.c',
'openssl/crypto/sm4/sm4.c',
'openssl/crypto/srp/srp_lib.c',
'openssl/crypto/srp/srp_vfy.c',
'openssl/crypto/stack/stack.c',
'openssl/crypto/store/store_err.c',
'openssl/crypto/store/store_init.c',
'openssl/crypto/store/store_lib.c',

'openssl/crypto/store/store_meth.c',
'openssl/crypto/store/store_register.c',
'openssl/crypto/store/store_result.c',
'openssl/crypto/store/store_strings.c',
'openssl/crypto/ts/ts_asn1.c',
'openssl/crypto/ts/ts_conf.c',
'openssl/crypto/ts/ts_err.c',
'openssl/crypto/ts/ts_lib.c',
'openssl/crypto/ts/ts_req_print.c',
'openssl/crypto/ts/ts_req_utils.c',
'openssl/crypto/ts/ts_rsp_print.c',
'openssl/crypto/ts/ts_rsp_sign.c',
'openssl/crypto/ts/ts_rsp_utils.c',
'openssl/crypto/ts/ts_rsp_verify.c',
'openssl/crypto/ts/ts_verify_ctx.c',
'openssl/crypto/txt_db/txt_db.c',
'openssl/crypto/ui/ui_err.c',
'openssl/crypto/ui/ui_lib.c',
'openssl/crypto/ui/ui_null.c',
'openssl/crypto/ui/ui_openssl.c',
'openssl/crypto/ui/ui_util.c',
'openssl/crypto/whrlpool/wp_block.c',
'openssl/crypto/whrlpool/wp_dgst.c',
'openssl/crypto/x509/by_dir.c',

'openssl/crypto/x509/by_file.c',
'openssl/crypto/x509/by_store.c',
'openssl/crypto/x509/pcy_cache.c',
'openssl/crypto/x509/pcy_data.c',
'openssl/crypto/x509/pcy_lib.c',
'openssl/crypto/x509/pcy_map.c',
'openssl/crypto/x509/pcy_node.c',
'openssl/crypto/x509/pcy_tree.c',
'openssl/crypto/x509/t_crl.c',
'openssl/crypto/x509/t_req.c',
'openssl/crypto/x509/t_x509.c',
'openssl/crypto/x509/v3_addr.c',
'openssl/crypto/x509/v3_admis.c',
'openssl/crypto/x509/v3_akeya.c',
'openssl/crypto/x509/v3_akid.c',
'openssl/crypto/x509/v3_asid.c',
'openssl/crypto/x509/v3_bcons.c',
'openssl/crypto/x509/v3_bitst.c',
'openssl/crypto/x509/v3_conf.c',
'openssl/crypto/x509/v3_cpols.c',
'openssl/crypto/x509/v3_crld.c',
'openssl/crypto/x509/v3_enum.c',
'openssl/crypto/x509/v3_extku.c',

'openssl/crypto/x509/v3_genn.c',
'openssl/crypto/x509/v3_ia5.c',
'openssl/crypto/x509/v3_info.c',
'openssl/crypto/x509/v3_int.c',
'openssl/crypto/x509/v3_ist.c',
'openssl/crypto/x509/v3_lib.c',
'openssl/crypto/x509/v3_ncons.c',
'openssl/crypto/x509/v3_pci.c',
'openssl/crypto/x509/v3_pcia.c',
'openssl/crypto/x509/v3_pcons.c',
'openssl/crypto/x509/v3_pku.c',
'openssl/crypto/x509/v3_pmaps.c',
'openssl/crypto/x509/v3_prn.c',
'openssl/crypto/x509/v3_purp.c',
'openssl/crypto/x509/v3_san.c',
'openssl/crypto/x509/v3_skid.c',
'openssl/crypto/x509/v3_sxnet.c',
'openssl/crypto/x509/v3_tlsf.c',
'openssl/crypto/x509/v3_utf8.c',
'openssl/crypto/x509/v3_utl.c',
'openssl/crypto/x509/v3err.c',
'openssl/crypto/x509/x509_att.c',
'openssl/crypto/x509/x509_cmp.c',
'openssl/crypto/x509/x509_d2.c',
'openssl/crypto/x509/x509_def.c',
'openssl/crypto/x509/x509_err.c',
'openssl/crypto/x509/x509_ext.c',
'openssl/crypto/x509/x509_lu.c',
'openssl/crypto/x509/x509_meth.c',
'openssl/crypto/x509/x509_obj.c',
'openssl/crypto/x509/x509_r2x.c',
'openssl/crypto/x509/x509_req.c',
'openssl/crypto/x509/x509_set.c',
'openssl/crypto/x509/x509_trust.c',
'openssl/crypto/x509/x509_txt.c',
'openssl/crypto/x509/x509_v3.c',
'openssl/crypto/x509/x509_vfy.c',
'openssl/crypto/x509/x509_vpm.c',
'openssl/crypto/x509/x509cset.c',
'openssl/crypto/x509/x509name.c',
'openssl/crypto/x509/x509rset.c',
'openssl/crypto/x509/x509spki.c',
'openssl/crypto/x509/x509type.c',
'openssl/crypto/x509/x_all.c',
'openssl/crypto/x509/x_attrib.c',
'openssl/crypto/x509/x_crl.c',
'openssl/crypto/x509/x_exten.c',
'openssl/crypto/x509/x_name.c',

'openssl/crypto/x509/x_pubkey.c',
'openssl/crypto/x509/x_req.c',
'openssl/crypto/x509/x_x509.c',
'openssl/crypto/x509/x_x509a.c',
'openssl/engines/e_capi.c',
'openssl/engines/e_devcrypto.c',
'openssl/engines/e_padlock.c',
'openssl/providers/baseprov.c',
'openssl/providers/defltprov.c',
'openssl/providers/nullprov.c',
'openssl/providers/prov_running.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/der/der_sm2_key.c',
'openssl/providers/common/der/der_sm2_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_default.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/asymciphers/sm2_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_hw.c',
'openssl/providers/implementations/ciphers/cipher_camellia.c',
'openssl/providers/implementations/ciphers/cipher_camellia_hw.c',

'openssl/providers/implementations/ciphers/cipher_chacha20.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_null.c',
'openssl/providers/implementations/ciphers/cipher_sm4.c',
'openssl/providers/implementations/ciphers/cipher_sm4_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap_hw.c',
'openssl/providers/implementations/digests/blake2_prov.c',
'openssl/providers/implementations/digests/blake2b_prov.c',
'openssl/providers/implementations/digests/blake2s_prov.c',
'openssl/providers/implementations/digests/md5_prov.c',
'openssl/providers/implementations/digests/md5_sha1_prov.c',

'openssl/providers/implementations/digests/null_prov.c',
'openssl/providers/implementations/digests/ripemd_prov.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/digests/sm3_prov.c',
'openssl/providers/implementations/encode_decode/decode_der2key.c',
'openssl/providers/implementations/encode_decode/decode_epki2pki.c',
'openssl/providers/implementations/encode_decode/decode_msblob2key.c',
'openssl/providers/implementations/encode_decode/decode_pem2der.c',
'openssl/providers/implementations/encode_decode/decode_pvk2key.c',
'openssl/providers/implementations/encode_decode/decode_spki2typespki.c',
'openssl/providers/implementations/encode_decode/encode_key2any.c',
'openssl/providers/implementations/encode_decode/encode_key2blob.c',
'openssl/providers/implementations/encode_decode/encode_key2ms.c',
'openssl/providers/implementations/encode_decode/encode_key2text.c',
'openssl/providers/implementations/encode_decode/endecoder_common.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/krb5kdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/pkcs12kdf.c',
'openssl/providers/implementations/kdfs/scrypt.c',

'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/blake2b_mac.c',
'openssl/providers/implementations/macs/blake2s_mac.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/macs/poly1305_prov.c',
'openssl/providers/implementations/macs/siphash_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/seed_src.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/rands/seeding/rand_cpu_x86.c',
'openssl/providers/implementations/rands/seeding/rand_tsc.c',
'openssl/providers/implementations/rands/seeding/rand_unix.c',
'openssl/providers/implementations/rands/seeding/rand_win.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',
'openssl/providers/implementations/signature/sm2_sig.c',
'openssl/providers/implementations/storemgmt/file_store.c',
'openssl/providers/implementations/storemgmt/file_store_any2obj.c',
'openssl/ssl/s3_cbc.c',
'openssl/providers/common/der/der_dsa_key.c',
'openssl/providers/common/der/der_dsa_sig.c',
'openssl/providers/common/der/der_ec_key.c',
'openssl/providers/common/der/der_ec_sig.c',
'openssl/providers/common/der/der_ecx_key.c',
'openssl/providers/common/der/der_rsa_key.c',
'openssl/providers/common/provider_ctx.c',
'openssl/providers/common/provider_err.c',

```
  'openssl/providers/implementations/ciphers/ciphercommon.c',
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
   'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish_hw.c',
  'openssl/providers/implementations/ciphers/cipher_cast5.c',
  'openssl/providers/implementations/ciphers/cipher_cast5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_des.c',
  'openssl/providers/implementations/ciphers/cipher_des_hw.c',
  'openssl/providers/implementations/ciphers/cipher_desx.c',
  'openssl/providers/implementations/ciphers/cipher_desx_hw.c',
  'openssl/providers/implementations/ciphers/cipher_idea.c',
  'openssl/providers/implementations/ciphers/cipher_idea_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc2.c',
   'openssl/providers/implementations/ciphers/cipher_rc2_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hw.c',
  'openssl/providers/implementations/ciphers/cipher_seed.c',
  'openssl/providers/implementations/ciphers/cipher_seed_hw.c',
  'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
  'openssl/providers/implementations/digests/md4_prov.c',
  'openssl/providers/implementations/digests/mdc2_prov.c',
  'openssl/providers/implementations/digests/ripemd_prov.c',
  'openssl/providers/implementations/digests/wp_prov.c',
  'openssl/providers/implementations/kdfs/pbkdf1.c',
  'openssl/providers/prov_running.c',
  'openssl/providers/legacyprov.c',
],
'openssl_sources_BSD-x86': [
   './config/archs/BSD-x86/asm_avx2/crypto/aes/aes-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/aes/aesni-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/aes/vpaes-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bf/bf-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bn/bn-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bn/co-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bn/x86-gf2m.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bn/x86-mont.S',
  './config/archs/BSD-x86/asm_avx2/crypto/camellia/cmll-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/chacha/chacha-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/des/crypt586.S',
```

```
    './config/archs/BSD-x86/asm_avx2/crypto/des/des-586.S',
    './config/archs/BSD-x86/asm_avx2/crypto/ec/ecp_nistz256-x86.S',
    './config/archs/BSD-x86/asm_avx2/crypto/x86cpuid.S',
    './config/archs/BSD-x86/asm_avx2/crypto/md5/md5-586.S',
    './config/archs/BSD-x86/asm_avx2/crypto/modes/ghash-x86.S',
     './config/archs/BSD-x86/asm_avx2/crypto/poly1305/poly1305-x86.S',
    './config/archs/BSD-x86/asm_avx2/crypto/rc4/rc4-586.S',
    './config/archs/BSD-x86/asm_avx2/crypto/ripemd/rmd-586.S',
    './config/archs/BSD-x86/asm_avx2/crypto/sha/sha1-586.S',
    './config/archs/BSD-x86/asm_avx2/crypto/sha/sha256-586.S',
    './config/archs/BSD-x86/asm_avx2/crypto/sha/sha512-586.S',
    './config/archs/BSD-x86/asm_avx2/crypto/whrlpool/wp-mmx.S',
    './config/archs/BSD-x86/asm_avx2/engines/e_padlock-x86.S',
    './config/archs/BSD-x86/asm_avx2/providers/common/der/der_sm2_gen.c',
    './config/archs/BSD-x86/asm_avx2/providers/common/der/der_digests_gen.c',
    './config/archs/BSD-x86/asm_avx2/providers/common/der/der_dsa_gen.c',
    './config/archs/BSD-x86/asm_avx2/providers/common/der/der_ec_gen.c',
    './config/archs/BSD-x86/asm_avx2/providers/common/der/der_ecx_gen.c',
    './config/archs/BSD-x86/asm_avx2/providers/common/der/der_rsa_gen.c',

'./config/archs/BSD-x86/asm_avx2/providers/common/der/der_wrap_gen.c',
    './config/archs/BSD-x86/asm_avx2/providers/legacy.ld',
    './config/archs/BSD-x86/asm_avx2/providers/fips.ld',
  ],
  'openssl_defines_BSD-x86': [
    'NDEBUG',
    'L_ENDIAN',
    'OPENSSL_BUILDING_OPENSSL',
    'AES_ASM',
    'CMLL_ASM',
    'DES_ASM',
    'ECP_NISTZ256_ASM',
    'GHASH_ASM',
    'MD5_ASM',
    'OPENSSL_BN_ASM_GF2m',
    'OPENSSL_BN_ASM_MONT',
    'OPENSSL_BN_ASM_PART_WORDS',
    'OPENSSL_CPUID_OBJ',
    'OPENSSL_IA32_SSE2',
    'PADLOCK_ASM',
    'POLY1305_ASM',
    'RC4_ASM',
    'RMD160_ASM',
    'SHA1_ASM',
    'SHA256_ASM',
    'SHA512_ASM',
    'VPAES_ASM',
    'WHIRLPOOL_ASM',
```

```
    'OPENSSL_PIC',
  ],
  'openssl_cflags_BSD-x86': [
    '-Wa,--noexecstack',
    '-Wall -O3 -fomit-frame-pointer',
    '-pthread',
    '-Wall -O3 -fomit-frame-pointer',
  ],
  'openssl_ex_libs_BSD-x86': [
    '-pthread',
  ],
 },
 'include_dirs':
 [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86)'],
 'cflags' : ['<@(openssl_cflags_BSD-x86)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86)'],
 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86)'],
 },
}
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/ess.h.in
*
* Copyright 2019-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_ESS_H
# define OPENSSL_ESS_H
# pragma once

# include <openssl/opensslconf.h>
```

```
# include <openssl/safestack.h>
# include <openssl/x509.h>
# include <openssl/esserr.h>

# ifdef  __cplusplus
extern "C" {
# endif


typedef struct ESS_issuer_serial ESS_ISSUER_SERIAL;
typedef struct ESS_cert_id ESS_CERT_ID;
typedef struct ESS_signing_cert ESS_SIGNING_CERT;

SKM_DEFINE_STACK_OF_INTERNAL(ESS_CERT_ID, ESS_CERT_ID, ESS_CERT_ID)
#define sk_ESS_CERT_ID_num(sk) OPENSSL_sk_num(ossl_check_const_ESS_CERT_ID_sk_type(sk))
#define sk_ESS_CERT_ID_value(sk, idx) ((ESS_CERT_ID
 *)OPENSSL_sk_value(ossl_check_const_ESS_CERT_ID_sk_type(sk), (idx)))
#define sk_ESS_CERT_ID_new(cmp) ((STACK_OF(ESS_CERT_ID)
*)OPENSSL_sk_new(ossl_check_ESS_CERT_ID_compfunc_type(cmp)))
#define sk_ESS_CERT_ID_new_null() ((STACK_OF(ESS_CERT_ID) *)OPENSSL_sk_new_null())
#define sk_ESS_CERT_ID_new_reserve(cmp, n) ((STACK_OF(ESS_CERT_ID)
*)OPENSSL_sk_new_reserve(ossl_check_ESS_CERT_ID_compfunc_type(cmp), (n)))
#define sk_ESS_CERT_ID_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ESS_CERT_ID_sk_type(sk), (n))
#define sk_ESS_CERT_ID_free(sk) OPENSSL_sk_free(ossl_check_ESS_CERT_ID_sk_type(sk))
#define sk_ESS_CERT_ID_zero(sk) OPENSSL_sk_zero(ossl_check_ESS_CERT_ID_sk_type(sk))
#define sk_ESS_CERT_ID_delete(sk, i) ((ESS_CERT_ID
*)OPENSSL_sk_delete(ossl_check_ESS_CERT_ID_sk_type(sk), (i)))
#define sk_ESS_CERT_ID_delete_ptr(sk, ptr) ((ESS_CERT_ID
*)OPENSSL_sk_delete_ptr(ossl_check_ESS_CERT_ID_sk_type(sk), ossl_check_ESS_CERT_ID_type(ptr)))
#define sk_ESS_CERT_ID_push(sk, ptr) OPENSSL_sk_push(ossl_check_ESS_CERT_ID_sk_type(sk),
 ossl_check_ESS_CERT_ID_type(ptr))
#define sk_ESS_CERT_ID_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_ESS_CERT_ID_sk_type(sk),
ossl_check_ESS_CERT_ID_type(ptr))
#define sk_ESS_CERT_ID_pop(sk) ((ESS_CERT_ID
*)OPENSSL_sk_pop(ossl_check_ESS_CERT_ID_sk_type(sk)))
#define sk_ESS_CERT_ID_shift(sk) ((ESS_CERT_ID
*)OPENSSL_sk_shift(ossl_check_ESS_CERT_ID_sk_type(sk)))
#define sk_ESS_CERT_ID_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ESS_CERT_ID_sk_type(sk),ossl_check_ESS_CERT_ID_freefunc_type(freefu
nc))
#define sk_ESS_CERT_ID_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_ESS_CERT_ID_sk_type(sk),
ossl_check_ESS_CERT_ID_type(ptr), (idx))
#define sk_ESS_CERT_ID_set(sk, idx, ptr) ((ESS_CERT_ID
*)OPENSSL_sk_set(ossl_check_ESS_CERT_ID_sk_type(sk), (idx), ossl_check_ESS_CERT_ID_type(ptr)))
#define sk_ESS_CERT_ID_find(sk, ptr) OPENSSL_sk_find(ossl_check_ESS_CERT_ID_sk_type(sk),
ossl_check_ESS_CERT_ID_type(ptr))
#define sk_ESS_CERT_ID_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_ESS_CERT_ID_sk_type(sk),
```

```
 ossl_check_ESS_CERT_ID_type(ptr))
#define sk_ESS_CERT_ID_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ESS_CERT_ID_sk_type(sk), ossl_check_ESS_CERT_ID_type(ptr), pnum)
#define sk_ESS_CERT_ID_sort(sk) OPENSSL_sk_sort(ossl_check_ESS_CERT_ID_sk_type(sk))
#define sk_ESS_CERT_ID_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_ESS_CERT_ID_sk_type(sk))
#define sk_ESS_CERT_ID_dup(sk) ((STACK_OF(ESS_CERT_ID)
*)OPENSSL_sk_dup(ossl_check_const_ESS_CERT_ID_sk_type(sk)))
#define sk_ESS_CERT_ID_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ESS_CERT_ID)
*)OPENSSL_sk_deep_copy(ossl_check_const_ESS_CERT_ID_sk_type(sk),
ossl_check_ESS_CERT_ID_copyfunc_type(copyfunc), ossl_check_ESS_CERT_ID_freefunc_type(freefunc)))
#define sk_ESS_CERT_ID_set_cmp_func(sk, cmp)
((sk_ESS_CERT_ID_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ESS_CERT_ID_sk_type(sk),
ossl_check_ESS_CERT_ID_compfunc_type(cmp)))



typedef struct ESS_signing_cert_v2_st ESS_SIGNING_CERT_V2;
typedef
 struct ESS_cert_id_v2_st ESS_CERT_ID_V2;

SKM_DEFINE_STACK_OF_INTERNAL(ESS_CERT_ID_V2, ESS_CERT_ID_V2, ESS_CERT_ID_V2)
#define sk_ESS_CERT_ID_V2_num(sk) OPENSSL_sk_num(ossl_check_const_ESS_CERT_ID_V2_sk_type(sk))
#define sk_ESS_CERT_ID_V2_value(sk, idx) ((ESS_CERT_ID_V2
*)OPENSSL_sk_value(ossl_check_const_ESS_CERT_ID_V2_sk_type(sk), (idx)))
#define sk_ESS_CERT_ID_V2_new(cmp) ((STACK_OF(ESS_CERT_ID_V2)
*)OPENSSL_sk_new(ossl_check_ESS_CERT_ID_V2_compfunc_type(cmp)))
#define sk_ESS_CERT_ID_V2_new_null() ((STACK_OF(ESS_CERT_ID_V2) *)OPENSSL_sk_new_null())
#define sk_ESS_CERT_ID_V2_new_reserve(cmp, n) ((STACK_OF(ESS_CERT_ID_V2)
*)OPENSSL_sk_new_reserve(ossl_check_ESS_CERT_ID_V2_compfunc_type(cmp), (n)))
#define sk_ESS_CERT_ID_V2_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ESS_CERT_ID_V2_sk_type(sk),
(n))
#define sk_ESS_CERT_ID_V2_free(sk) OPENSSL_sk_free(ossl_check_ESS_CERT_ID_V2_sk_type(sk))
#define sk_ESS_CERT_ID_V2_zero(sk) OPENSSL_sk_zero(ossl_check_ESS_CERT_ID_V2_sk_type(sk))
#define
 sk_ESS_CERT_ID_V2_delete(sk, i) ((ESS_CERT_ID_V2
*)OPENSSL_sk_delete(ossl_check_ESS_CERT_ID_V2_sk_type(sk), (i)))
#define sk_ESS_CERT_ID_V2_delete_ptr(sk, ptr) ((ESS_CERT_ID_V2
*)OPENSSL_sk_delete_ptr(ossl_check_ESS_CERT_ID_V2_sk_type(sk),
ossl_check_ESS_CERT_ID_V2_type(ptr)))
#define sk_ESS_CERT_ID_V2_push(sk, ptr) OPENSSL_sk_push(ossl_check_ESS_CERT_ID_V2_sk_type(sk),
ossl_check_ESS_CERT_ID_V2_type(ptr))
#define sk_ESS_CERT_ID_V2_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_ESS_CERT_ID_V2_sk_type(sk), ossl_check_ESS_CERT_ID_V2_type(ptr))
#define sk_ESS_CERT_ID_V2_pop(sk) ((ESS_CERT_ID_V2
*)OPENSSL_sk_pop(ossl_check_ESS_CERT_ID_V2_sk_type(sk)))
#define sk_ESS_CERT_ID_V2_shift(sk) ((ESS_CERT_ID_V2
*)OPENSSL_sk_shift(ossl_check_ESS_CERT_ID_V2_sk_type(sk)))
#define sk_ESS_CERT_ID_V2_pop_free(sk, freefunc)
```

```
OPENSSL_sk_pop_free(ossl_check_ESS_CERT_ID_V2_sk_type(sk),ossl_check_ESS_CERT_ID_V2_freefunc_ty
pe(freefunc))
#define sk_ESS_CERT_ID_V2_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_ESS_CERT_ID_V2_sk_type(sk),
 ossl_check_ESS_CERT_ID_V2_type(ptr), (idx))
#define sk_ESS_CERT_ID_V2_set(sk, idx, ptr) ((ESS_CERT_ID_V2
*)OPENSSL_sk_set(ossl_check_ESS_CERT_ID_V2_sk_type(sk), (idx),
ossl_check_ESS_CERT_ID_V2_type(ptr)))
#define sk_ESS_CERT_ID_V2_find(sk, ptr) OPENSSL_sk_find(ossl_check_ESS_CERT_ID_V2_sk_type(sk),
ossl_check_ESS_CERT_ID_V2_type(ptr))
#define sk_ESS_CERT_ID_V2_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_ESS_CERT_ID_V2_sk_type(sk), ossl_check_ESS_CERT_ID_V2_type(ptr))
#define sk_ESS_CERT_ID_V2_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ESS_CERT_ID_V2_sk_type(sk), ossl_check_ESS_CERT_ID_V2_type(ptr),
pnum)
#define sk_ESS_CERT_ID_V2_sort(sk) OPENSSL_sk_sort(ossl_check_ESS_CERT_ID_V2_sk_type(sk))
#define sk_ESS_CERT_ID_V2_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_ESS_CERT_ID_V2_sk_type(sk))
#define sk_ESS_CERT_ID_V2_dup(sk) ((STACK_OF(ESS_CERT_ID_V2)
*)OPENSSL_sk_dup(ossl_check_const_ESS_CERT_ID_V2_sk_type(sk)))
#define
 sk_ESS_CERT_ID_V2_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ESS_CERT_ID_V2)
*)OPENSSL_sk_deep_copy(ossl_check_const_ESS_CERT_ID_V2_sk_type(sk),
ossl_check_ESS_CERT_ID_V2_copyfunc_type(copyfunc),
ossl_check_ESS_CERT_ID_V2_freefunc_type(freefunc)))
#define sk_ESS_CERT_ID_V2_set_cmp_func(sk, cmp)
((sk_ESS_CERT_ID_V2_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ESS_CERT_ID_V2_sk_type(sk),
ossl_check_ESS_CERT_ID_V2_compfunc_type(cmp)))


DECLARE_ASN1_ALLOC_FUNCTIONS(ESS_ISSUER_SERIAL)
DECLARE_ASN1_ENCODE_FUNCTIONS_only(ESS_ISSUER_SERIAL, ESS_ISSUER_SERIAL)
DECLARE_ASN1_DUP_FUNCTION(ESS_ISSUER_SERIAL)

DECLARE_ASN1_ALLOC_FUNCTIONS(ESS_CERT_ID)
DECLARE_ASN1_ENCODE_FUNCTIONS_only(ESS_CERT_ID, ESS_CERT_ID)
DECLARE_ASN1_DUP_FUNCTION(ESS_CERT_ID)

DECLARE_ASN1_FUNCTIONS(ESS_SIGNING_CERT)
DECLARE_ASN1_DUP_FUNCTION(ESS_SIGNING_CERT)

DECLARE_ASN1_ALLOC_FUNCTIONS(ESS_CERT_ID_V2)
DECLARE_ASN1_ENCODE_FUNCTIONS_only(ESS_CERT_ID_V2, ESS_CERT_ID_V2)
DECLARE_ASN1_DUP_FUNCTION(ESS_CERT_ID_V2)

DECLARE_ASN1_FUNCTIONS(ESS_SIGNING_CERT_V2)
DECLARE_ASN1_DUP_FUNCTION(ESS_SIGNING_CERT_V2)
```

```
ESS_SIGNING_CERT
 *OSSL_ESS_signing_cert_new_init(const X509 *signcert,
                                 const STACK_OF(X509) *certs,
                                 int set_issuer_serial);
ESS_SIGNING_CERT_V2 *OSSL_ESS_signing_cert_v2_new_init(const EVP_MD *hash_alg,
                                   const X509 *signcert,
                                   const
                                   STACK_OF(X509) *certs,
                                   int set_issuer_serial);
int OSSL_ESS_check_signing_certs(const ESS_SIGNING_CERT *ss,
                     const ESS_SIGNING_CERT_V2 *ssv2,
                     const STACK_OF(X509) *chain,
                     int require_signing_cert);

# ifdef  __cplusplus
}
# endif
#endif
```

(The MIT License)

Copyright (c) 2012 Nathan Rajlich <nathan@tootallnate.net>

Permission is hereby granted, free of charge, to any person
obtaining a copy of this software and associated documentation
files (the "Software"), to deal in the Software without
restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following
conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT
HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM,
 OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
OTHER DEALINGS IN THE SOFTWARE.
ISC

```
{
 'variables': {
   'openssl_sources': [
     'openssl/ssl/bio_ssl.c',
```

'openssl/ssl/d1_lib.c',
'openssl/ssl/d1_msg.c',
'openssl/ssl/d1_srtp.c',
'openssl/ssl/methods.c',
'openssl/ssl/pqueue.c',
'openssl/ssl/s3_enc.c',
'openssl/ssl/s3_lib.c',
'openssl/ssl/s3_msg.c',
'openssl/ssl/ssl_asn1.c',
'openssl/ssl/ssl_cert.c',
'openssl/ssl/ssl_ciph.c',
'openssl/ssl/ssl_conf.c',
'openssl/ssl/ssl_err.c',
'openssl/ssl/ssl_err_legacy.c',
'openssl/ssl/ssl_init.c',
'openssl/ssl/ssl_lib.c',
'openssl/ssl/ssl_mcnf.c',
'openssl/ssl/ssl_rsa.c',
'openssl/ssl/ssl_rsa_legacy.c',
'openssl/ssl/ssl_sess.c',
'openssl/ssl/ssl_stat.c',
'openssl/ssl/ssl_txt.c',
'openssl/ssl/ssl_utst.c',
'openssl/ssl/t1_enc.c',
'openssl/ssl/t1_lib.c',
'openssl/ssl/t1_trce.c',
'openssl/ssl/tls13_enc.c',
'openssl/ssl/tls_depr.c',
'openssl/ssl/tls_srp.c',
'openssl/ssl/record/dtls1_bitmap.c',
'openssl/ssl/record/rec_layer_d1.c',
'openssl/ssl/record/rec_layer_s3.c',
'openssl/ssl/record/ssl3_buffer.c',
'openssl/ssl/record/ssl3_record.c',
'openssl/ssl/record/ssl3_record_tls13.c',
'openssl/ssl/statem/extensions.c',
'openssl/ssl/statem/extensions_clnt.c',
'openssl/ssl/statem/extensions_cust.c',
'openssl/ssl/statem/extensions_srvr.c',
'openssl/ssl/statem/statem.c',
'openssl/ssl/statem/statem_clnt.c',
'openssl/ssl/statem/statem_dtls.c',
'openssl/ssl/statem/statem_lib.c',
'openssl/ssl/statem/statem_srvr.c',
'openssl/crypto/aes/aes_cfb.c',
'openssl/crypto/aes/aes_ecb.c',
'openssl/crypto/aes/aes_ige.c',
'openssl/crypto/aes/aes_misc.c',

'openssl/crypto/aes/aes_ofb.c',
'openssl/crypto/aes/aes_wrap.c',
'openssl/crypto/aria/aria.c',
'openssl/crypto/asn1/a_bitstr.c',
'openssl/crypto/asn1/a_d2i_fp.c',
'openssl/crypto/asn1/a_digest.c',
'openssl/crypto/asn1/a_dup.c',
'openssl/crypto/asn1/a_gentm.c',
'openssl/crypto/asn1/a_i2d_fp.c',
'openssl/crypto/asn1/a_int.c',
'openssl/crypto/asn1/a_mbstr.c',
'openssl/crypto/asn1/a_object.c',
'openssl/crypto/asn1/a_octet.c',
'openssl/crypto/asn1/a_print.c',
'openssl/crypto/asn1/a_sign.c',
'openssl/crypto/asn1/a_strex.c',
'openssl/crypto/asn1/a_strnid.c',
'openssl/crypto/asn1/a_time.c',
'openssl/crypto/asn1/a_type.c',
'openssl/crypto/asn1/a_utctm.c',
'openssl/crypto/asn1/a_utf8.c',
'openssl/crypto/asn1/a_verify.c',
'openssl/crypto/asn1/ameth_lib.c',
'openssl/crypto/asn1/asn1_err.c',
'openssl/crypto/asn1/asn1_gen.c',
'openssl/crypto/asn1/asn1_item_list.c',
'openssl/crypto/asn1/asn1_lib.c',
'openssl/crypto/asn1/asn1_parse.c',
'openssl/crypto/asn1/asn_mime.c',
'openssl/crypto/asn1/asn_moid.c',
'openssl/crypto/asn1/asn_mstbl.c',
'openssl/crypto/asn1/asn_pack.c',
'openssl/crypto/asn1/bio_asn1.c',
'openssl/crypto/asn1/bio_ndef.c',
'openssl/crypto/asn1/d2i_param.c',
'openssl/crypto/asn1/d2i_pr.c',
'openssl/crypto/asn1/d2i_pu.c',
'openssl/crypto/asn1/evp_asn1.c',
'openssl/crypto/asn1/f_int.c',
'openssl/crypto/asn1/f_string.c',
'openssl/crypto/asn1/i2d_evp.c',
'openssl/crypto/asn1/n_pkey.c',
'openssl/crypto/asn1/nsseq.c',
'openssl/crypto/asn1/p5_pbe.c',
'openssl/crypto/asn1/p5_pbev2.c',
'openssl/crypto/asn1/p5_scrypt.c',
'openssl/crypto/asn1/p8_pkey.c',
'openssl/crypto/asn1/t_bitst.c',

'openssl/crypto/asn1/t_pkey.c',
'openssl/crypto/asn1/t_spki.c',
'openssl/crypto/asn1/tasn_dec.c',
'openssl/crypto/asn1/tasn_enc.c',
'openssl/crypto/asn1/tasn_fre.c',
'openssl/crypto/asn1/tasn_new.c',
'openssl/crypto/asn1/tasn_prn.c',
'openssl/crypto/asn1/tasn_scn.c',
'openssl/crypto/asn1/tasn_typ.c',
'openssl/crypto/asn1/tasn_utl.c',
'openssl/crypto/asn1/x_algor.c',
'openssl/crypto/asn1/x_bignum.c',
'openssl/crypto/asn1/x_info.c',
'openssl/crypto/asn1/x_int64.c',
'openssl/crypto/asn1/x_long.c',
'openssl/crypto/asn1/x_pkey.c',
'openssl/crypto/asn1/x_sig.c',
'openssl/crypto/asn1/x_spki.c',
'openssl/crypto/asn1/x_val.c',
'openssl/crypto/async/arch/async_null.c',
'openssl/crypto/async/arch/async_posix.c',
'openssl/crypto/async/arch/async_win.c',
'openssl/crypto/async/async.c',
'openssl/crypto/async/async_err.c',
'openssl/crypto/async/async_wait.c',
'openssl/crypto/bf/bf_cfb64.c',
'openssl/crypto/bf/bf_ecb.c',
'openssl/crypto/bf/bf_ofb64.c',
'openssl/crypto/bf/bf_skey.c',
'openssl/crypto/bio/bf_buff.c',
'openssl/crypto/bio/bf_lbuf.c',
'openssl/crypto/bio/bf_nbio.c',
'openssl/crypto/bio/bf_null.c',
'openssl/crypto/bio/bf_prefix.c',
'openssl/crypto/bio/bf_readbuff.c',
'openssl/crypto/bio/bio_addr.c',
'openssl/crypto/bio/bio_cb.c',
'openssl/crypto/bio/bio_dump.c',
'openssl/crypto/bio/bio_err.c',
'openssl/crypto/bio/bio_lib.c',
'openssl/crypto/bio/bio_meth.c',
'openssl/crypto/bio/bio_print.c',
'openssl/crypto/bio/bio_sock.c',
'openssl/crypto/bio/bio_sock2.c',
'openssl/crypto/bio/bss_acpt.c',
'openssl/crypto/bio/bss_bio.c',
'openssl/crypto/bio/bss_conn.c',
'openssl/crypto/bio/bss_core.c',

'openssl/crypto/bio/bss_dgram.c',
'openssl/crypto/bio/bss_fd.c',
'openssl/crypto/bio/bss_file.c',
'openssl/crypto/bio/bss_log.c',
'openssl/crypto/bio/bss_mem.c',
'openssl/crypto/bio/bss_null.c',
'openssl/crypto/bio/bss_sock.c',
'openssl/crypto/bio/ossl_core_bio.c',
'openssl/crypto/bn/bn_add.c',
'openssl/crypto/bn/bn_blind.c',
'openssl/crypto/bn/bn_const.c',

'openssl/crypto/bn/bn_conv.c',
'openssl/crypto/bn/bn_ctx.c',
'openssl/crypto/bn/bn_depr.c',
'openssl/crypto/bn/bn_dh.c',
'openssl/crypto/bn/bn_div.c',
'openssl/crypto/bn/bn_err.c',
'openssl/crypto/bn/bn_exp.c',
'openssl/crypto/bn/bn_exp2.c',
'openssl/crypto/bn/bn_gcd.c',
'openssl/crypto/bn/bn_gf2m.c',
'openssl/crypto/bn/bn_intern.c',
'openssl/crypto/bn/bn_kron.c',
'openssl/crypto/bn/bn_lib.c',
'openssl/crypto/bn/bn_mod.c',
'openssl/crypto/bn/bn_mont.c',
'openssl/crypto/bn/bn_mpi.c',
'openssl/crypto/bn/bn_mul.c',
'openssl/crypto/bn/bn_nist.c',
'openssl/crypto/bn/bn_prime.c',
'openssl/crypto/bn/bn_print.c',
'openssl/crypto/bn/bn_rand.c',
'openssl/crypto/bn/bn_recp.c',
'openssl/crypto/bn/bn_rsa_fips186_4.c',
'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_srp.c',

'openssl/crypto/bn/bn_word.c',
'openssl/crypto/bn/bn_x931p.c',
'openssl/crypto/buffer/buf_err.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/camellia/cmll_cfb.c',
'openssl/crypto/camellia/cmll_ctr.c',
'openssl/crypto/camellia/cmll_ecb.c',
'openssl/crypto/camellia/cmll_ofb.c',

'openssl/crypto/cast/c_cfb64.c',
'openssl/crypto/cast/c_ecb.c',
'openssl/crypto/cast/c_enc.c',
'openssl/crypto/cast/c_ofb64.c',
'openssl/crypto/cast/c_skey.c',
'openssl/crypto/cmac/cmac.c',
'openssl/crypto/cmp/cmp_asn.c',
'openssl/crypto/cmp/cmp_client.c',
'openssl/crypto/cmp/cmp_ctx.c',
'openssl/crypto/cmp/cmp_err.c',
'openssl/crypto/cmp/cmp_hdr.c',
'openssl/crypto/cmp/cmp_http.c',
'openssl/crypto/cmp/cmp_msg.c',
'openssl/crypto/cmp/cmp_protect.c',
'openssl/crypto/cmp/cmp_server.c',
'openssl/crypto/cmp/cmp_status.c',
'openssl/crypto/cmp/cmp_util.c',
'openssl/crypto/cmp/cmp_vfy.c',
'openssl/crypto/cms/cms_asn1.c',
'openssl/crypto/cms/cms_att.c',
'openssl/crypto/cms/cms_cd.c',
'openssl/crypto/cms/cms_dd.c',
'openssl/crypto/cms/cms_dh.c',
'openssl/crypto/cms/cms_ec.c',
'openssl/crypto/cms/cms_enc.c',
'openssl/crypto/cms/cms_env.c',
'openssl/crypto/cms/cms_err.c',
'openssl/crypto/cms/cms_ess.c',
'openssl/crypto/cms/cms_io.c',
'openssl/crypto/cms/cms_kari.c',
'openssl/crypto/cms/cms_lib.c',
'openssl/crypto/cms/cms_pwri.c',
'openssl/crypto/cms/cms_rsa.c',
'openssl/crypto/cms/cms_sd.c',
'openssl/crypto/cms/cms_smime.c',
'openssl/crypto/conf/conf_api.c',
'openssl/crypto/conf/conf_def.c',
'openssl/crypto/conf/conf_err.c',
'openssl/crypto/conf/conf_lib.c',
'openssl/crypto/conf/conf_mall.c',
'openssl/crypto/conf/conf_mod.c',
'openssl/crypto/conf/conf_sap.c',
'openssl/crypto/conf/conf_ssl.c',
'openssl/crypto/crmf/crmf_asn.c',
'openssl/crypto/crmf/crmf_err.c',
'openssl/crypto/crmf/crmf_lib.c',
'openssl/crypto/crmf/crmf_pbm.c',
'openssl/crypto/ct/ct_b64.c',

'openssl/crypto/ct/ct_err.c',
'openssl/crypto/ct/ct_log.c',
'openssl/crypto/ct/ct_oct.c',
'openssl/crypto/ct/ct_policy.c',
'openssl/crypto/ct/ct_prn.c',
'openssl/crypto/ct/ct_sct.c',
'openssl/crypto/ct/ct_sct_ctx.c',
'openssl/crypto/ct/ct_vfy.c',
'openssl/crypto/ct/ct_x509v3.c',
'openssl/crypto/des/cbc_cksm.c',
'openssl/crypto/des/cbc_enc.c',
'openssl/crypto/des/cfb64ede.c',
'openssl/crypto/des/cfb64enc.c',
'openssl/crypto/des/cfb_enc.c',
'openssl/crypto/des/ecb3_enc.c',
'openssl/crypto/des/ecb_enc.c',
'openssl/crypto/des/fcrypt.c',
'openssl/crypto/des/ofb64ede.c',
'openssl/crypto/des/ofb64enc.c',
'openssl/crypto/des/ofb_enc.c',
'openssl/crypto/des/pcbc_enc.c',
'openssl/crypto/des/qud_cksm.c',
'openssl/crypto/des/rand_key.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/des/str2key.c',
'openssl/crypto/des/xcbc_enc.c',
'openssl/crypto/dh/dh_ameth.c',
'openssl/crypto/dh/dh_asn1.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_depr.c',
'openssl/crypto/dh/dh_err.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dh/dh_meth.c',
'openssl/crypto/dh/dh_pmeth.c',
'openssl/crypto/dh/dh_prn.c',
'openssl/crypto/dh/dh_rfc5114.c',
'openssl/crypto/dsa/dsa_ameth.c',
'openssl/crypto/dsa/dsa_asn1.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_depr.c',
'openssl/crypto/dsa/dsa_err.c',
'openssl/crypto/dsa/dsa_gen.c',

'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_meth.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_pmeth.c',
'openssl/crypto/dsa/dsa_prn.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/dso/dso_dl.c',
'openssl/crypto/dso/dso_dlfcn.c',
'openssl/crypto/dso/dso_err.c',
'openssl/crypto/dso/dso_lib.c',
'openssl/crypto/dso/dso_openssl.c',
'openssl/crypto/dso/dso_vms.c',
'openssl/crypto/dso/dso_win32.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_ameth.c',
'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_deprecated.c',
'openssl/crypto/ec/ec_err.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ec_pmeth.c',
'openssl/crypto/ec/ec_print.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/eck_prn.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',

'openssl/crypto/ec/ecp_nistz256.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/ec/ecx_meth.c',
'openssl/crypto/encode_decode/decoder_err.c',
'openssl/crypto/encode_decode/decoder_lib.c',
'openssl/crypto/encode_decode/decoder_meth.c',
'openssl/crypto/encode_decode/decoder_pkey.c',
'openssl/crypto/encode_decode/encoder_err.c',
'openssl/crypto/encode_decode/encoder_lib.c',
'openssl/crypto/encode_decode/encoder_meth.c',
'openssl/crypto/encode_decode/encoder_pkey.c',
'openssl/crypto/engine/eng_all.c',
'openssl/crypto/engine/eng_cnf.c',
'openssl/crypto/engine/eng_ctrl.c',
'openssl/crypto/engine/eng_dyn.c',
'openssl/crypto/engine/eng_err.c',
'openssl/crypto/engine/eng_fat.c',
'openssl/crypto/engine/eng_init.c',
'openssl/crypto/engine/eng_lib.c',
'openssl/crypto/engine/eng_list.c',
'openssl/crypto/engine/eng_openssl.c',
'openssl/crypto/engine/eng_pkey.c',
'openssl/crypto/engine/eng_rdrand.c',
'openssl/crypto/engine/eng_table.c',
'openssl/crypto/engine/tb_asnmth.c',
'openssl/crypto/engine/tb_cipher.c',
'openssl/crypto/engine/tb_dh.c',
'openssl/crypto/engine/tb_digest.c',
'openssl/crypto/engine/tb_dsa.c',
'openssl/crypto/engine/tb_eckey.c',
'openssl/crypto/engine/tb_pkmeth.c',
'openssl/crypto/engine/tb_rand.c',
'openssl/crypto/engine/tb_rsa.c',
'openssl/crypto/err/err.c',
'openssl/crypto/err/err_all.c',
'openssl/crypto/err/err_all_legacy.c',
'openssl/crypto/err/err_blocks.c',
'openssl/crypto/err/err_prn.c',
'openssl/crypto/ess/ess_asn1.c',
'openssl/crypto/ess/ess_err.c',
'openssl/crypto/ess/ess_lib.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/bio_b64.c',
'openssl/crypto/evp/bio_enc.c',
'openssl/crypto/evp/bio_md.c',

'openssl/crypto/evp/bio_ok.c',
'openssl/crypto/evp/c_allc.c',
'openssl/crypto/evp/c_alld.c',
'openssl/crypto/evp/cmeth_lib.c',
'openssl/crypto/evp/ctrl_params_translate.c',
'openssl/crypto/evp/dh_ctrl.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/dsa_ctrl.c',
'openssl/crypto/evp/e_aes.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha1.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha256.c',
'openssl/crypto/evp/e_aria.c',
'openssl/crypto/evp/e_bf.c',
'openssl/crypto/evp/e_camellia.c',
'openssl/crypto/evp/e_cast.c',
'openssl/crypto/evp/e_chacha20_poly1305.c',
'openssl/crypto/evp/e_des.c',
'openssl/crypto/evp/e_des3.c',
'openssl/crypto/evp/e_idea.c',
'openssl/crypto/evp/e_null.c',
'openssl/crypto/evp/e_old.c',
'openssl/crypto/evp/e_rc2.c',
'openssl/crypto/evp/e_rc4.c',
'openssl/crypto/evp/e_rc4_hmac_md5.c',
'openssl/crypto/evp/e_rc5.c',
'openssl/crypto/evp/e_seed.c',
'openssl/crypto/evp/e_sm4.c',
'openssl/crypto/evp/e_xcbc_d.c',
'openssl/crypto/evp/ec_ctrl.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/encode.c',
'openssl/crypto/evp/evp_cnf.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_err.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_key.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_pbe.c',
'openssl/crypto/evp/evp_pkey.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',

'openssl/crypto/evp/legacy_blake2.c',
'openssl/crypto/evp/legacy_md4.c',
'openssl/crypto/evp/legacy_md5.c',
'openssl/crypto/evp/legacy_md5_sha1.c',
'openssl/crypto/evp/legacy_mdc2.c',
'openssl/crypto/evp/legacy_ripemd.c',
'openssl/crypto/evp/legacy_sha.c',
'openssl/crypto/evp/legacy_wp.c',
'openssl/crypto/evp/m_null.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/names.c',
'openssl/crypto/evp/p5_crpt.c',
'openssl/crypto/evp/p5_crpt2.c',
'openssl/crypto/evp/p_dec.c',
'openssl/crypto/evp/p_enc.c',
'openssl/crypto/evp/p_legacy.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/p_open.c',
'openssl/crypto/evp/p_seal.c',
'openssl/crypto/evp/p_sign.c',
'openssl/crypto/evp/p_verify.c',
'openssl/crypto/evp/pbe_scrypt.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/http/http_client.c',
'openssl/crypto/http/http_err.c',
'openssl/crypto/http/http_lib.c',
'openssl/crypto/idea/i_cbc.c',
'openssl/crypto/idea/i_cfb64.c',
'openssl/crypto/idea/i_ecb.c',
'openssl/crypto/idea/i_ofb64.c',
'openssl/crypto/idea/i_skey.c',
'openssl/crypto/kdf/kdf_err.c',
'openssl/crypto/lhash/lh_stats.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',

'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpt_err.c',

'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/cversion.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ebcdic.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/getenv.c',
'openssl/crypto/info.c',
'openssl/crypto/init.c',
'openssl/crypto/initthread.c',
'openssl/crypto/mem.c',
'openssl/crypto/mem_sec.c',
'openssl/crypto/o_dir.c',
'openssl/crypto/o_fopen.c',
'openssl/crypto/o_init.c',
'openssl/crypto/o_str.c',
'openssl/crypto/o_time.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/passphrase.c',
'openssl/crypto/provider.c',
'openssl/crypto/provider_child.c',
'openssl/crypto/provider_conf.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/punycode.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/trace.c',
'openssl/crypto/uid.c',
'openssl/crypto/md4/md4_dgst.c',
'openssl/crypto/md4/md4_one.c',

'openssl/crypto/md5/md5_dgst.c',
'openssl/crypto/md5/md5_one.c',
'openssl/crypto/md5/md5_sha1.c',
'openssl/crypto/mdc2/mdc2_one.c',
'openssl/crypto/mdc2/mdc2dgst.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/cts128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ocb128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/siv128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/objects/o_names.c',
'openssl/crypto/objects/obj_dat.c',
'openssl/crypto/objects/obj_err.c',
'openssl/crypto/objects/obj_lib.c',
'openssl/crypto/objects/obj_xref.c',
'openssl/crypto/ocsp/ocsp_asn.c',
'openssl/crypto/ocsp/ocsp_cl.c',
'openssl/crypto/ocsp/ocsp_err.c',
'openssl/crypto/ocsp/ocsp_ext.c',
'openssl/crypto/ocsp/ocsp_http.c',
'openssl/crypto/ocsp/ocsp_lib.c',
'openssl/crypto/ocsp/ocsp_prn.c',
'openssl/crypto/ocsp/ocsp_srv.c',
'openssl/crypto/ocsp/ocsp_vfy.c',
'openssl/crypto/ocsp/v3_ocsp.c',
'openssl/crypto/pem/pem_all.c',
'openssl/crypto/pem/pem_err.c',
'openssl/crypto/pem/pem_info.c',
'openssl/crypto/pem/pem_lib.c',
'openssl/crypto/pem/pem_oth.c',
'openssl/crypto/pem/pem_pk8.c',
'openssl/crypto/pem/pem_pkey.c',
'openssl/crypto/pem/pem_sign.c',
'openssl/crypto/pem/pem_x509.c',
'openssl/crypto/pem/pem_xaux.c',
'openssl/crypto/pem/pvkfmt.c',
'openssl/crypto/pkcs12/p12_add.c',
'openssl/crypto/pkcs12/p12_asn.c',
'openssl/crypto/pkcs12/p12_attr.c',
'openssl/crypto/pkcs12/p12_crpt.c',
'openssl/crypto/pkcs12/p12_crt.c',
'openssl/crypto/pkcs12/p12_decr.c',

'openssl/crypto/pkcs12/p12_init.c',
'openssl/crypto/pkcs12/p12_key.c',
'openssl/crypto/pkcs12/p12_kiss.c',
'openssl/crypto/pkcs12/p12_mutl.c',
'openssl/crypto/pkcs12/p12_npas.c',
'openssl/crypto/pkcs12/p12_p8d.c',
'openssl/crypto/pkcs12/p12_p8e.c',
'openssl/crypto/pkcs12/p12_sbag.c',
'openssl/crypto/pkcs12/p12_utl.c',
'openssl/crypto/pkcs12/pk12err.c',
'openssl/crypto/pkcs7/bio_pk7.c',
'openssl/crypto/pkcs7/pk7_asn1.c',
'openssl/crypto/pkcs7/pk7_attr.c',
'openssl/crypto/pkcs7/pk7_doit.c',
'openssl/crypto/pkcs7/pk7_lib.c',
'openssl/crypto/pkcs7/pk7_mime.c',
'openssl/crypto/pkcs7/pk7_smime.c',
'openssl/crypto/pkcs7/pkcs7err.c',
'openssl/crypto/poly1305/poly1305.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_err.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/prov_seed.c',
'openssl/crypto/rand/rand_deprecated.c',
'openssl/crypto/rand/rand_err.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rand/rand_meth.c',
'openssl/crypto/rand/rand_pool.c',
'openssl/crypto/rand/randfile.c',
'openssl/crypto/rc2/rc2_cbc.c',
'openssl/crypto/rc2/rc2_ecb.c',
'openssl/crypto/rc2/rc2_skey.c',
'openssl/crypto/rc2/rc2cfb64.c',
'openssl/crypto/rc2/rc2ofb64.c',
'openssl/crypto/ripemd/rmd_dgst.c',
'openssl/crypto/ripemd/rmd_one.c',
'openssl/crypto/rsa/rsa_ameth.c',
'openssl/crypto/rsa/rsa_asn1.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_depr.c',
'openssl/crypto/rsa/rsa_err.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',

'openssl/crypto/rsa/rsa_meth.c',
'openssl/crypto/rsa/rsa_mp.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pmeth.c',
'openssl/crypto/rsa/rsa_prn.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_saos.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/rsa/rsa_x931g.c',
'openssl/crypto/seed/seed.c',
'openssl/crypto/seed/seed_cbc.c',
'openssl/crypto/seed/seed_cfb.c',
'openssl/crypto/seed/seed_ecb.c',
'openssl/crypto/seed/seed_ofb.c',
'openssl/crypto/sha/keccak1600.c',
'openssl/crypto/sha/sha1_one.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/siphash/siphash.c',
'openssl/crypto/sm2/sm2_crypt.c',
'openssl/crypto/sm2/sm2_err.c',
'openssl/crypto/sm2/sm2_key.c',
'openssl/crypto/sm2/sm2_sign.c',
'openssl/crypto/sm3/legacy_sm3.c',
'openssl/crypto/sm3/sm3.c',
'openssl/crypto/sm4/sm4.c',
'openssl/crypto/srp/srp_lib.c',
'openssl/crypto/srp/srp_vfy.c',
'openssl/crypto/stack/stack.c',
'openssl/crypto/store/store_err.c',
'openssl/crypto/store/store_init.c',
'openssl/crypto/store/store_lib.c',
'openssl/crypto/store/store_meth.c',
'openssl/crypto/store/store_register.c',
'openssl/crypto/store/store_result.c',
'openssl/crypto/store/store_strings.c',
'openssl/crypto/ts/ts_asn1.c',
'openssl/crypto/ts/ts_conf.c',

'openssl/crypto/ts/ts_err.c',
'openssl/crypto/ts/ts_lib.c',
'openssl/crypto/ts/ts_req_print.c',
'openssl/crypto/ts/ts_req_utils.c',
'openssl/crypto/ts/ts_rsp_print.c',
'openssl/crypto/ts/ts_rsp_sign.c',
'openssl/crypto/ts/ts_rsp_utils.c',
'openssl/crypto/ts/ts_rsp_verify.c',
'openssl/crypto/ts/ts_verify_ctx.c',
'openssl/crypto/txt_db/txt_db.c',
'openssl/crypto/ui/ui_err.c',
'openssl/crypto/ui/ui_lib.c',
'openssl/crypto/ui/ui_null.c',
'openssl/crypto/ui/ui_openssl.c',
'openssl/crypto/ui/ui_util.c',
'openssl/crypto/whrlpool/wp_block.c',
'openssl/crypto/whrlpool/wp_dgst.c',
'openssl/crypto/x509/by_dir.c',

'openssl/crypto/x509/by_file.c',
'openssl/crypto/x509/by_store.c',
'openssl/crypto/x509/pcy_cache.c',
'openssl/crypto/x509/pcy_data.c',
'openssl/crypto/x509/pcy_lib.c',
'openssl/crypto/x509/pcy_map.c',
'openssl/crypto/x509/pcy_node.c',
'openssl/crypto/x509/pcy_tree.c',
'openssl/crypto/x509/t_crl.c',
'openssl/crypto/x509/t_req.c',
'openssl/crypto/x509/t_x509.c',
'openssl/crypto/x509/v3_addr.c',
'openssl/crypto/x509/v3_admis.c',
'openssl/crypto/x509/v3_akeya.c',
'openssl/crypto/x509/v3_akid.c',
'openssl/crypto/x509/v3_asid.c',
'openssl/crypto/x509/v3_bcons.c',
'openssl/crypto/x509/v3_bitst.c',
'openssl/crypto/x509/v3_conf.c',
'openssl/crypto/x509/v3_cpols.c',
'openssl/crypto/x509/v3_crld.c',
'openssl/crypto/x509/v3_enum.c',
'openssl/crypto/x509/v3_extku.c',
'openssl/crypto/x509/v3_genn.c',
'openssl/crypto/x509/v3_ia5.c',
'openssl/crypto/x509/v3_info.c',
'openssl/crypto/x509/v3_int.c',
'openssl/crypto/x509/v3_ist.c',
'openssl/crypto/x509/v3_lib.c',

'openssl/crypto/x509/v3_ncons.c',
'openssl/crypto/x509/v3_pci.c',
'openssl/crypto/x509/v3_pcia.c',
'openssl/crypto/x509/v3_pcons.c',
'openssl/crypto/x509/v3_pku.c',
'openssl/crypto/x509/v3_pmaps.c',
'openssl/crypto/x509/v3_prn.c',
'openssl/crypto/x509/v3_purp.c',
'openssl/crypto/x509/v3_san.c',
'openssl/crypto/x509/v3_skid.c',
'openssl/crypto/x509/v3_sxnet.c',
'openssl/crypto/x509/v3_tlsf.c',
'openssl/crypto/x509/v3_utf8.c',
'openssl/crypto/x509/v3_utl.c',
'openssl/crypto/x509/v3err.c',
'openssl/crypto/x509/x509_att.c',
'openssl/crypto/x509/x509_cmp.c',
'openssl/crypto/x509/x509_d2.c',
'openssl/crypto/x509/x509_def.c',
'openssl/crypto/x509/x509_err.c',
'openssl/crypto/x509/x509_ext.c',
'openssl/crypto/x509/x509_lu.c',
'openssl/crypto/x509/x509_meth.c',
'openssl/crypto/x509/x509_obj.c',
'openssl/crypto/x509/x509_r2x.c',
'openssl/crypto/x509/x509_req.c',
'openssl/crypto/x509/x509_set.c',
'openssl/crypto/x509/x509_trust.c',
'openssl/crypto/x509/x509_txt.c',
'openssl/crypto/x509/x509_v3.c',
'openssl/crypto/x509/x509_vfy.c',
'openssl/crypto/x509/x509_vpm.c',
'openssl/crypto/x509/x509cset.c',
'openssl/crypto/x509/x509name.c',
'openssl/crypto/x509/x509rset.c',
'openssl/crypto/x509/x509spki.c',
'openssl/crypto/x509/x509type.c',
'openssl/crypto/x509/x_all.c',
'openssl/crypto/x509/x_attrib.c',
'openssl/crypto/x509/x_crl.c',
'openssl/crypto/x509/x_exten.c',
'openssl/crypto/x509/x_name.c',
'openssl/crypto/x509/x_pubkey.c',
'openssl/crypto/x509/x_req.c',
'openssl/crypto/x509/x_x509.c',
'openssl/crypto/x509/x_x509a.c',
'openssl/engines/e_capi.c',
'openssl/engines/e_devcrypto.c',

'openssl/engines/e_padlock.c',
'openssl/providers/baseprov.c',
'openssl/providers/defltprov.c',
'openssl/providers/nullprov.c',
'openssl/providers/prov_running.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/der/der_sm2_key.c',
'openssl/providers/common/der/der_sm2_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_default.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/asymciphers/sm2_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_hw.c',
'openssl/providers/implementations/ciphers/cipher_camellia.c',
'openssl/providers/implementations/ciphers/cipher_camellia_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_null.c',

'openssl/providers/implementations/ciphers/cipher_sm4.c',
'openssl/providers/implementations/ciphers/cipher_sm4_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap_hw.c',
'openssl/providers/implementations/digests/blake2_prov.c',
'openssl/providers/implementations/digests/blake2b_prov.c',
'openssl/providers/implementations/digests/blake2s_prov.c',
'openssl/providers/implementations/digests/md5_prov.c',
'openssl/providers/implementations/digests/md5_sha1_prov.c',

'openssl/providers/implementations/digests/null_prov.c',
'openssl/providers/implementations/digests/ripemd_prov.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/digests/sm3_prov.c',
'openssl/providers/implementations/encode_decode/decode_der2key.c',
'openssl/providers/implementations/encode_decode/decode_epki2pki.c',
'openssl/providers/implementations/encode_decode/decode_msblob2key.c',
'openssl/providers/implementations/encode_decode/decode_pem2der.c',
'openssl/providers/implementations/encode_decode/decode_pvk2key.c',
'openssl/providers/implementations/encode_decode/decode_spki2typespki.c',
'openssl/providers/implementations/encode_decode/encode_key2any.c',
'openssl/providers/implementations/encode_decode/encode_key2blob.c',
'openssl/providers/implementations/encode_decode/encode_key2ms.c',
'openssl/providers/implementations/encode_decode/encode_key2text.c',
'openssl/providers/implementations/encode_decode/endecoder_common.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/krb5kdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/pkcs12kdf.c',
'openssl/providers/implementations/kdfs/scrypt.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',

'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/blake2b_mac.c',
'openssl/providers/implementations/macs/blake2s_mac.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/macs/poly1305_prov.c',
'openssl/providers/implementations/macs/siphash_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/seed_src.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/rands/seeding/rand_cpu_x86.c',
'openssl/providers/implementations/rands/seeding/rand_tsc.c',
'openssl/providers/implementations/rands/seeding/rand_unix.c',
'openssl/providers/implementations/rands/seeding/rand_win.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',
'openssl/providers/implementations/signature/sm2_sig.c',
'openssl/providers/implementations/storemgmt/file_store.c',
'openssl/providers/implementations/storemgmt/file_store_any2obj.c',
'openssl/ssl/s3_cbc.c',
'openssl/providers/common/der/der_dsa_key.c',
'openssl/providers/common/der/der_dsa_sig.c',
'openssl/providers/common/der/der_ec_key.c',
'openssl/providers/common/der/der_ec_sig.c',
'openssl/providers/common/der/der_ecx_key.c',
'openssl/providers/common/der/der_rsa_key.c',
'openssl/providers/common/provider_ctx.c',
'openssl/providers/common/provider_err.c',
'openssl/providers/implementations/ciphers/ciphercommon.c',
'openssl/providers/implementations/ciphers/ciphercommon_block.c',
'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',

```
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish_hw.c',
  'openssl/providers/implementations/ciphers/cipher_cast5.c',
  'openssl/providers/implementations/ciphers/cipher_cast5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_des.c',
  'openssl/providers/implementations/ciphers/cipher_des_hw.c',
  'openssl/providers/implementations/ciphers/cipher_desx.c',
  'openssl/providers/implementations/ciphers/cipher_desx_hw.c',
  'openssl/providers/implementations/ciphers/cipher_idea.c',
  'openssl/providers/implementations/ciphers/cipher_idea_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc2.c',
  'openssl/providers/implementations/ciphers/cipher_rc2_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hw.c',
  'openssl/providers/implementations/ciphers/cipher_seed.c',
  'openssl/providers/implementations/ciphers/cipher_seed_hw.c',
  'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
  'openssl/providers/implementations/digests/md4_prov.c',
  'openssl/providers/implementations/digests/mdc2_prov.c',
  'openssl/providers/implementations/digests/ripemd_prov.c',
  'openssl/providers/implementations/digests/wp_prov.c',
  'openssl/providers/implementations/kdfs/pbkdf1.c',
  'openssl/providers/prov_running.c',
  'openssl/providers/legacyprov.c',
],
'openssl_sources_BSD-x86': [
  './config/archs/BSD-x86/asm/crypto/aes/aes-586.S',
  './config/archs/BSD-x86/asm/crypto/aes/aesni-x86.S',
  './config/archs/BSD-x86/asm/crypto/aes/vpaes-x86.S',
  './config/archs/BSD-x86/asm/crypto/bf/bf-586.S',
  './config/archs/BSD-x86/asm/crypto/bn/bn-586.S',
  './config/archs/BSD-x86/asm/crypto/bn/co-586.S',
  './config/archs/BSD-x86/asm/crypto/bn/x86-gf2m.S',
  './config/archs/BSD-x86/asm/crypto/bn/x86-mont.S',
  './config/archs/BSD-x86/asm/crypto/camellia/cmll-x86.S',
  './config/archs/BSD-x86/asm/crypto/chacha/chacha-x86.S',
  './config/archs/BSD-x86/asm/crypto/des/crypt586.S',
  './config/archs/BSD-x86/asm/crypto/des/des-586.S',
  './config/archs/BSD-x86/asm/crypto/ec/ecp_nistz256-x86.S',
  './config/archs/BSD-x86/asm/crypto/x86cpuid.S',
  './config/archs/BSD-x86/asm/crypto/md5/md5-586.S',
  './config/archs/BSD-x86/asm/crypto/modes/ghash-x86.S',
```

```
  './config/archs/BSD-x86/asm/crypto/poly1305/poly1305-x86.S',
   './config/archs/BSD-x86/asm/crypto/rc4/rc4-586.S',
  './config/archs/BSD-x86/asm/crypto/ripemd/rmd-586.S',
  './config/archs/BSD-x86/asm/crypto/sha/sha1-586.S',
  './config/archs/BSD-x86/asm/crypto/sha/sha256-586.S',
  './config/archs/BSD-x86/asm/crypto/sha/sha512-586.S',
  './config/archs/BSD-x86/asm/crypto/whrlpool/wp-mmx.S',
  './config/archs/BSD-x86/asm/engines/e_padlock-x86.S',
  './config/archs/BSD-x86/asm/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_wrap_gen.c',
  './config/archs/BSD-x86/asm/providers/legacy.ld',
  './config/archs/BSD-x86/asm/providers/fips.ld',
 ],
'openssl_defines_BSD-x86': [
  'NDEBUG',
  'L_ENDIAN',
  'OPENSSL_BUILDING_OPENSSL',
  'AES_ASM',
  'CMLL_ASM',
  'DES_ASM',
  'ECP_NISTZ256_ASM',
  'GHASH_ASM',
  'MD5_ASM',
  'OPENSSL_BN_ASM_GF2m',
  'OPENSSL_BN_ASM_MONT',
  'OPENSSL_BN_ASM_PART_WORDS',
  'OPENSSL_CPUID_OBJ',
  'OPENSSL_IA32_SSE2',
  'PADLOCK_ASM',
  'POLY1305_ASM',
  'RC4_ASM',
  'RMD160_ASM',
  'SHA1_ASM',
  'SHA256_ASM',
  'SHA512_ASM',
  'VPAES_ASM',
  'WHIRLPOOL_ASM',
  'OPENSSL_PIC',
 ],
'openssl_cflags_BSD-x86': [
  '-Wa,--noexecstack',
  '-Wall -O3 -fomit-frame-pointer',
  '-pthread',
```

```
    '-Wall -O3 -fomit-frame-pointer',
  ],
  'openssl_ex_libs_BSD-x86': [
    '-pthread',
  ],
 },
 'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86)'],
  'cflags' : ['<@(openssl_cflags_BSD-x86)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86)'],
 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86)'],
 },
}
```

The ISC License

Copyright (c) 2017-2022 npm, Inc., Isaac Z. Schlueter, and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

The ISC License

Copyright (c) 2015-2023 Benjamin Coe, Isaac Z. Schlueter, and Contributors

Permission to use, copy, modify, and/or distribute this software
for any purpose with or without fee is hereby granted, provided
that the above copyright notice and this permission notice
appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES

OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE
LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES
OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS,
WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION,
ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
Copyright (c) 2014 IndigoUnited

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is furnished
to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE
 SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.
#ifndef SRC_PERMISSION_PERMISSION_BASE_H_
#define SRC_PERMISSION_PERMISSION_BASE_H_

#if defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS

#include <map>
#include <string>
#include <string_view>
#include "v8.h"

namespace node {

class Environment;

namespace permission {

#define FILESYSTEM_PERMISSIONS(V)   \
 V(FileSystem, "fs", PermissionsRoot)   \
 V(FileSystemRead, "fs.read", FileSystem)   \
 V(FileSystemWrite, "fs.write", FileSystem)

#define CHILD_PROCESS_PERMISSIONS(V) V(ChildProcess, "child", PermissionsRoot)

```
#define WASI_PERMISSIONS(V) V(WASI, "wasi", PermissionsRoot)

#define WORKER_THREADS_PERMISSIONS(V)                                  \
 V(WorkerThreads, "worker", PermissionsRoot)

#define INSPECTOR_PERMISSIONS(V) V(Inspector, "inspector", PermissionsRoot)

#define PERMISSIONS(V)                                          \
 FILESYSTEM_PERMISSIONS(V)
                                        \
 CHILD_PROCESS_PERMISSIONS(V)                                       \
 WASI_PERMISSIONS(V)                                          \
 WORKER_THREADS_PERMISSIONS(V)                                        \
 INSPECTOR_PERMISSIONS(V)

#define V(name, _, __) k##name,
enum class PermissionScope {
 kPermissionsRoot = -1,
 PERMISSIONS(V) kPermissionsCount
};
#undef V

class PermissionBase {
public:
 virtual void Apply(Environment* env,
                    const std::vector<std::string>& allow,
                    PermissionScope scope) = 0;
 virtual bool is_granted(Environment* env,
                         PermissionScope perm,
                         const std::string_view& param = "") const = 0;
};

}  // namespace permission

}  // namespace node

#endif  // defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS
#endif  // SRC_PERMISSION_PERMISSION_BASE_H_
                              Apache License
                        Version 2.0, January 2004
                     http://www.apache.org/licenses/

  TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

  1. Definitions.

     "License" shall mean the terms and conditions for use, reproduction,
     and distribution as defined by Sections 1 through 9 of this document.
```

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,

and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work,

excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions

of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "{}" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright {yyyy} {name of copyright owner}

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

```
    http://www.apache.org/licenses/LICENSE-2.0

  Unless required by applicable law or agreed to in writing, software
 distributed under the License is distributed on an "AS IS" BASIS,
 WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
 See the License for the specific language governing permissions and
 limitations under the License.
{
 'variables': {
  'openssl_sources': [
    'openssl/crypto/aes/aes_ecb.c',
    'openssl/crypto/aes/aes_misc.c',
    'openssl/crypto/bn/asm/x86_64-gcc.c',
    'openssl/crypto/bn/bn_add.c',
    'openssl/crypto/bn/bn_blind.c',
    'openssl/crypto/bn/bn_const.c',
    'openssl/crypto/bn/bn_conv.c',
    'openssl/crypto/bn/bn_ctx.c',
    'openssl/crypto/bn/bn_dh.c',
    'openssl/crypto/bn/bn_div.c',
    'openssl/crypto/bn/bn_exp.c',
    'openssl/crypto/bn/bn_exp2.c',
    'openssl/crypto/bn/bn_gcd.c',
    'openssl/crypto/bn/bn_gf2m.c',
    'openssl/crypto/bn/bn_intern.c',
    'openssl/crypto/bn/bn_kron.c',
    'openssl/crypto/bn/bn_lib.c',
    'openssl/crypto/bn/bn_mod.c',
    'openssl/crypto/bn/bn_mont.c',
    'openssl/crypto/bn/bn_mpi.c',
    'openssl/crypto/bn/bn_mul.c',
    'openssl/crypto/bn/bn_nist.c',
    'openssl/crypto/bn/bn_prime.c',
    'openssl/crypto/bn/bn_rand.c',
    'openssl/crypto/bn/bn_recp.c',
    'openssl/crypto/bn/bn_rsa_fips186_4.c',
     'openssl/crypto/bn/bn_shift.c',
    'openssl/crypto/bn/bn_sqr.c',
    'openssl/crypto/bn/bn_sqrt.c',
    'openssl/crypto/bn/bn_word.c',
    'openssl/crypto/bn/rsaz_exp.c',
    'openssl/crypto/bn/rsaz_exp_x2.c',
    'openssl/crypto/buffer/buffer.c',
    'openssl/crypto/cmac/cmac.c',
    'openssl/crypto/des/des_enc.c',
    'openssl/crypto/des/ecb3_enc.c',
    'openssl/crypto/des/fcrypt_b.c',
    'openssl/crypto/des/set_key.c',
```

'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_nistz256.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/evp/asymcipher.c',

'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/initthread.c',
'openssl/crypto/o_str.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',

'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rsa/rsa_acvp_test_params.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/stack/stack.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/bio_prov.c',

'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_fips.c',
'openssl/providers/fips/fipsprov.c',
'openssl/providers/fips/self_test.c',
'openssl/providers/fips/self_test_kats.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',

```
  'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
  'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
  'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
  'openssl/providers/implementations/macs/cmac_prov.c',
  'openssl/providers/implementations/macs/gmac_prov.c',
  'openssl/providers/implementations/macs/hmac_prov.c',
  'openssl/providers/implementations/macs/kmac_prov.c',
  'openssl/providers/implementations/rands/crngt.c',
  'openssl/providers/implementations/rands/drbg.c',
  'openssl/providers/implementations/rands/drbg_ctr.c',
  'openssl/providers/implementations/rands/drbg_hash.c',
  'openssl/providers/implementations/rands/drbg_hmac.c',
  'openssl/providers/implementations/rands/test_rng.c',
   'openssl/providers/implementations/signature/dsa_sig.c',
  'openssl/providers/implementations/signature/ecdsa_sig.c',
  'openssl/providers/implementations/signature/eddsa_sig.c',
  'openssl/providers/implementations/signature/mac_legacy_sig.c',
  'openssl/providers/implementations/signature/rsa_sig.c',
  'openssl/ssl/s3_cbc.c',
  'openssl/providers/common/der/der_dsa_key.c',
  'openssl/providers/common/der/der_dsa_sig.c',
  'openssl/providers/common/der/der_ec_key.c',
  'openssl/providers/common/der/der_ec_sig.c',
  'openssl/providers/common/der/der_ecx_key.c',
  'openssl/providers/common/der/der_rsa_key.c',
  'openssl/providers/common/provider_ctx.c',
  'openssl/providers/common/provider_err.c',
  'openssl/providers/implementations/ciphers/ciphercommon.c',
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
   'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/fips/fips_entry.c',

 ],
 'openssl_sources_BSD-x86_64': [
  './config/archs/BSD-x86_64/asm/crypto/aes/aes-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/aesni-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/aesni-sha1-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/aesni-sha256-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/aesni-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/bsaes-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/vpaes-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/rsaz-avx2.s',
```

```
  './config/archs/BSD-x86_64/asm/crypto/bn/rsaz-avx512.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/rsaz-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/x86_64-gf2m.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/x86_64-mont.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/x86_64-mont5.s',
  './config/archs/BSD-x86_64/asm/crypto/camellia/cmll-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/chacha/chacha-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/ec/ecp_nistz256-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/ec/x25519-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/x86_64cpuid.s',
  './config/archs/BSD-x86_64/asm/crypto/md5/md5-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/modes/aesni-gcm-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/modes/ghash-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/poly1305/poly1305-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/rc4/rc4-md5-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/rc4/rc4-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/keccak1600-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha1-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha1-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha256-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha256-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha512-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/whrlpool/wp-x86_64.s',
  './config/archs/BSD-x86_64/asm/engines/e_padlock-x86_64.s',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_wrap_gen.c',
  './config/archs/BSD-x86_64/asm/providers/legacy.ld',
  './config/archs/BSD-x86_64/asm/providers/fips.ld',

],
'openssl_defines_BSD-x86_64': [
  'NDEBUG',
  'L_ENDIAN',
  'OPENSSL_BUILDING_OPENSSL',
  'AES_ASM',
  'BSAES_ASM',
  'ECP_NISTZ256_ASM',
  'FIPS_MODULE',
  'GHASH_ASM',
  'KECCAK1600_ASM',
  'OPENSSL_BN_ASM_GF2m',
  'OPENSSL_BN_ASM_MONT',
  'OPENSSL_BN_ASM_MONT5',
```

```
    'OPENSSL_CPUID_OBJ',
    'OPENSSL_IA32_SSE2',
    'SHA1_ASM',
    'SHA256_ASM',
    'SHA512_ASM',
    'VPAES_ASM',
    'X25519_ASM',
    'FIPS_MODULE',
  ],
  'openssl_cflags_BSD-x86_64': [
    '-Wa,--noexecstack',
    '-Wall -O3',
    '-pthread',
    '-Wall -O3',
  ],
  'openssl_ex_libs_BSD-x86_64': [
    '-pthread',
  ],
  'linker_script': ''
 },
 'include_dirs': [
  '.',
  './include',
  './crypto',
   './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86_64)'],
 'cflags': ['<@(openssl_cflags_BSD-x86_64)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],

 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86_64)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86_64)'],
 },
}
```

(The MIT License)

Copyright (c) 2014 Nathan Rajlich <nathan@tootallnate.net>

Permission is hereby granted, free of charge, to any person
obtaining a copy of this software and associated documentation
files (the "Software"), to deal in the Software without
restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following

conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT
HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
OTHER DEALINGS IN THE SOFTWARE.
version 1.2.12, March 27th, 2022

Copyright (C) 1995-2022 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied
warranty. In no event will the authors be held liable for any damages
arising from the use of this software.

Permission is granted to anyone to use this software for any purpose,
including commercial applications, and to alter it and redistribute it
freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not
  claim that you wrote the original software. If you use this software
  in a product, an acknowledgment in the product documentation would be
  appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be
  misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/x509.h.in
*
* Copyright 1995-2022 The OpenSSL Project Authors. All Rights Reserved.
* Copyright (c) 2002, Oracle and/or its affiliates. All rights reserved
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

```
#ifndef OPENSSL_X509_H
# define OPENSSL_X509_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_X509_H
# endif

# include <openssl/e_os2.h>
# include <openssl/types.h>
# include <openssl/symhacks.h>
# include <openssl/buffer.h>
# include <openssl/evp.h>
# include <openssl/bio.h>
# include <openssl/asn1.h>
# include <openssl/safestack.h>
# include <openssl/ec.h>

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  include <openssl/rsa.h>
#  include <openssl/dsa.h>
#
  include <openssl/dh.h>
# endif

# include <openssl/sha.h>
# include <openssl/x509err.h>

#ifdef  __cplusplus
extern "C" {
#endif

/* Needed stacks for types defined in other headers */
SKM_DEFINE_STACK_OF_INTERNAL(X509_NAME, X509_NAME, X509_NAME)
#define sk_X509_NAME_num(sk) OPENSSL_sk_num(ossl_check_const_X509_NAME_sk_type(sk))
#define sk_X509_NAME_value(sk, idx) ((X509_NAME
*)OPENSSL_sk_value(ossl_check_const_X509_NAME_sk_type(sk), (idx)))
#define sk_X509_NAME_new(cmp) ((STACK_OF(X509_NAME)
*)OPENSSL_sk_new(ossl_check_X509_NAME_compfunc_type(cmp)))
#define sk_X509_NAME_new_null() ((STACK_OF(X509_NAME) *)OPENSSL_sk_new_null())
#define sk_X509_NAME_new_reserve(cmp, n) ((STACK_OF(X509_NAME)
*)OPENSSL_sk_new_reserve(ossl_check_X509_NAME_compfunc_type(cmp), (n)))
#define sk_X509_NAME_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_NAME_sk_type(sk), (n))
#define sk_X509_NAME_free(sk) OPENSSL_sk_free(ossl_check_X509_NAME_sk_type(sk))
#define sk_X509_NAME_zero(sk) OPENSSL_sk_zero(ossl_check_X509_NAME_sk_type(sk))
#define
```

```
 sk_X509_NAME_delete(sk, i) ((X509_NAME *)OPENSSL_sk_delete(ossl_check_X509_NAME_sk_type(sk),
(i)))
#define sk_X509_NAME_delete_ptr(sk, ptr) ((X509_NAME
*)OPENSSL_sk_delete_ptr(ossl_check_X509_NAME_sk_type(sk), ossl_check_X509_NAME_type(ptr)))
#define sk_X509_NAME_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_NAME_sk_type(sk),
ossl_check_X509_NAME_type(ptr))
#define sk_X509_NAME_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_NAME_sk_type(sk),
ossl_check_X509_NAME_type(ptr))
#define sk_X509_NAME_pop(sk) ((X509_NAME *)OPENSSL_sk_pop(ossl_check_X509_NAME_sk_type(sk)))
#define sk_X509_NAME_shift(sk) ((X509_NAME *)OPENSSL_sk_shift(ossl_check_X509_NAME_sk_type(sk)))
#define sk_X509_NAME_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_NAME_sk_type(sk),ossl_check_X509_NAME_freefunc_type(freefunc)
)
#define sk_X509_NAME_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_NAME_sk_type(sk),
ossl_check_X509_NAME_type(ptr), (idx))
#define sk_X509_NAME_set(sk,
 idx, ptr) ((X509_NAME *)OPENSSL_sk_set(ossl_check_X509_NAME_sk_type(sk), (idx),
ossl_check_X509_NAME_type(ptr)))
#define sk_X509_NAME_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_NAME_sk_type(sk),
ossl_check_X509_NAME_type(ptr))
#define sk_X509_NAME_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_NAME_sk_type(sk),
ossl_check_X509_NAME_type(ptr))
#define sk_X509_NAME_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_X509_NAME_sk_type(sk),
ossl_check_X509_NAME_type(ptr), pnum)
#define sk_X509_NAME_sort(sk) OPENSSL_sk_sort(ossl_check_X509_NAME_sk_type(sk))
#define sk_X509_NAME_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_X509_NAME_sk_type(sk))
#define sk_X509_NAME_dup(sk) ((STACK_OF(X509_NAME)
*)OPENSSL_sk_dup(ossl_check_const_X509_NAME_sk_type(sk)))
#define sk_X509_NAME_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_NAME)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_NAME_sk_type(sk),
ossl_check_X509_NAME_copyfunc_type(copyfunc), ossl_check_X509_NAME_freefunc_type(freefunc)))
#define
 sk_X509_NAME_set_cmp_func(sk, cmp)
((sk_X509_NAME_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_NAME_sk_type(sk),
ossl_check_X509_NAME_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(X509, X509, X509)
#define sk_X509_num(sk) OPENSSL_sk_num(ossl_check_const_X509_sk_type(sk))
#define sk_X509_value(sk, idx) ((X509 *)OPENSSL_sk_value(ossl_check_const_X509_sk_type(sk), (idx)))
#define sk_X509_new(cmp) ((STACK_OF(X509) *)OPENSSL_sk_new(ossl_check_X509_compfunc_type(cmp)))
#define sk_X509_new_null() ((STACK_OF(X509) *)OPENSSL_sk_new_null())
#define sk_X509_new_reserve(cmp, n) ((STACK_OF(X509)
*)OPENSSL_sk_new_reserve(ossl_check_X509_compfunc_type(cmp), (n)))
#define sk_X509_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_sk_type(sk), (n))
#define sk_X509_free(sk) OPENSSL_sk_free(ossl_check_X509_sk_type(sk))
#define sk_X509_zero(sk) OPENSSL_sk_zero(ossl_check_X509_sk_type(sk))
#define sk_X509_delete(sk, i) ((X509 *)OPENSSL_sk_delete(ossl_check_X509_sk_type(sk),
 (i)))
#define sk_X509_delete_ptr(sk, ptr) ((X509 *)OPENSSL_sk_delete_ptr(ossl_check_X509_sk_type(sk),
```

ossl_check_X509_type(ptr)))
#define sk_X509_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_sk_type(sk), ossl_check_X509_type(ptr))
#define sk_X509_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_sk_type(sk),
ossl_check_X509_type(ptr))
#define sk_X509_pop(sk) ((X509 *)OPENSSL_sk_pop(ossl_check_X509_sk_type(sk)))
#define sk_X509_shift(sk) ((X509 *)OPENSSL_sk_shift(ossl_check_X509_sk_type(sk)))
#define sk_X509_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_sk_type(sk),ossl_check_X509_freefunc_type(freefunc))
#define sk_X509_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_sk_type(sk),
ossl_check_X509_type(ptr), (idx))
#define sk_X509_set(sk, idx, ptr) ((X509 *)OPENSSL_sk_set(ossl_check_X509_sk_type(sk), (idx),
ossl_check_X509_type(ptr)))
#define sk_X509_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_sk_type(sk), ossl_check_X509_type(ptr))
#define sk_X509_find_ex(sk,
ptr) OPENSSL_sk_find_ex(ossl_check_X509_sk_type(sk), ossl_check_X509_type(ptr))
#define sk_X509_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_X509_sk_type(sk),
ossl_check_X509_type(ptr), pnum)
#define sk_X509_sort(sk) OPENSSL_sk_sort(ossl_check_X509_sk_type(sk))
#define sk_X509_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_X509_sk_type(sk))
#define sk_X509_dup(sk) ((STACK_OF(X509) *)OPENSSL_sk_dup(ossl_check_const_X509_sk_type(sk)))
#define sk_X509_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_sk_type(sk), ossl_check_X509_copyfunc_type(copyfunc),
ossl_check_X509_freefunc_type(freefunc)))
#define sk_X509_set_cmp_func(sk, cmp)
((sk_X509_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_sk_type(sk),
ossl_check_X509_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(X509_REVOKED, X509_REVOKED, X509_REVOKED)
#define sk_X509_REVOKED_num(sk) OPENSSL_sk_num(ossl_check_const_X509_REVOKED_sk_type(sk))
#define sk_X509_REVOKED_value(sk,
idx) ((X509_REVOKED *)OPENSSL_sk_value(ossl_check_const_X509_REVOKED_sk_type(sk), (idx)))
#define sk_X509_REVOKED_new(cmp) ((STACK_OF(X509_REVOKED)
*)OPENSSL_sk_new(ossl_check_X509_REVOKED_compfunc_type(cmp)))
#define sk_X509_REVOKED_new_null() ((STACK_OF(X509_REVOKED) *)OPENSSL_sk_new_null())
#define sk_X509_REVOKED_new_reserve(cmp, n) ((STACK_OF(X509_REVOKED)
*)OPENSSL_sk_new_reserve(ossl_check_X509_REVOKED_compfunc_type(cmp), (n)))
#define sk_X509_REVOKED_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_REVOKED_sk_type(sk),
(n))
#define sk_X509_REVOKED_free(sk) OPENSSL_sk_free(ossl_check_X509_REVOKED_sk_type(sk))
#define sk_X509_REVOKED_zero(sk) OPENSSL_sk_zero(ossl_check_X509_REVOKED_sk_type(sk))
#define sk_X509_REVOKED_delete(sk, i) ((X509_REVOKED
*)OPENSSL_sk_delete(ossl_check_X509_REVOKED_sk_type(sk), (i)))
#define sk_X509_REVOKED_delete_ptr(sk, ptr) ((X509_REVOKED
*)OPENSSL_sk_delete_ptr(ossl_check_X509_REVOKED_sk_type(sk), ossl_check_X509_REVOKED_type(ptr)))
#define sk_X509_REVOKED_push(sk,
ptr) OPENSSL_sk_push(ossl_check_X509_REVOKED_sk_type(sk), ossl_check_X509_REVOKED_type(ptr))
#define sk_X509_REVOKED_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_REVOKED_sk_type(sk),
ossl_check_X509_REVOKED_type(ptr))
#define sk_X509_REVOKED_pop(sk) ((X509_REVOKED

*)OPENSSL_sk_pop(ossl_check_X509_REVOKED_sk_type(sk)))
#define sk_X509_REVOKED_shift(sk) ((X509_REVOKED
*)OPENSSL_sk_shift(ossl_check_X509_REVOKED_sk_type(sk)))
#define sk_X509_REVOKED_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_REVOKED_sk_type(sk),ossl_check_X509_REVOKED_freefunc_type(
freefunc))
#define sk_X509_REVOKED_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_REVOKED_sk_type(sk),
ossl_check_X509_REVOKED_type(ptr), (idx))
#define sk_X509_REVOKED_set(sk, idx, ptr) ((X509_REVOKED
*)OPENSSL_sk_set(ossl_check_X509_REVOKED_sk_type(sk), (idx), ossl_check_X509_REVOKED_type(ptr)))
#define sk_X509_REVOKED_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_REVOKED_sk_type(sk),
ossl_check_X509_REVOKED_type(ptr))
#define
sk_X509_REVOKED_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_REVOKED_sk_type(sk),
ossl_check_X509_REVOKED_type(ptr))
#define sk_X509_REVOKED_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_REVOKED_sk_type(sk), ossl_check_X509_REVOKED_type(ptr),
pnum)
#define sk_X509_REVOKED_sort(sk) OPENSSL_sk_sort(ossl_check_X509_REVOKED_sk_type(sk))
#define sk_X509_REVOKED_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509_REVOKED_sk_type(sk))
#define sk_X509_REVOKED_dup(sk) ((STACK_OF(X509_REVOKED)
*)OPENSSL_sk_dup(ossl_check_const_X509_REVOKED_sk_type(sk)))
#define sk_X509_REVOKED_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_REVOKED)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_REVOKED_sk_type(sk),
ossl_check_X509_REVOKED_copyfunc_type(copyfunc),
ossl_check_X509_REVOKED_freefunc_type(freefunc)))
#define sk_X509_REVOKED_set_cmp_func(sk, cmp)
((sk_X509_REVOKED_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_REVOKED_sk_type(sk),
ossl_check_X509_REVOKED_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(X509_CRL,
X509_CRL, X509_CRL)
#define sk_X509_CRL_num(sk) OPENSSL_sk_num(ossl_check_const_X509_CRL_sk_type(sk))
#define sk_X509_CRL_value(sk, idx) ((X509_CRL
*)OPENSSL_sk_value(ossl_check_const_X509_CRL_sk_type(sk), (idx)))
#define sk_X509_CRL_new(cmp) ((STACK_OF(X509_CRL)
*)OPENSSL_sk_new(ossl_check_X509_CRL_compfunc_type(cmp)))
#define sk_X509_CRL_new_null() ((STACK_OF(X509_CRL) *)OPENSSL_sk_new_null())
#define sk_X509_CRL_new_reserve(cmp, n) ((STACK_OF(X509_CRL)
*)OPENSSL_sk_new_reserve(ossl_check_X509_CRL_compfunc_type(cmp), (n)))
#define sk_X509_CRL_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_CRL_sk_type(sk), (n))
#define sk_X509_CRL_free(sk) OPENSSL_sk_free(ossl_check_X509_CRL_sk_type(sk))
#define sk_X509_CRL_zero(sk) OPENSSL_sk_zero(ossl_check_X509_CRL_sk_type(sk))
#define sk_X509_CRL_delete(sk, i) ((X509_CRL *)OPENSSL_sk_delete(ossl_check_X509_CRL_sk_type(sk),
(i)))
#define sk_X509_CRL_delete_ptr(sk, ptr) ((X509_CRL
*)OPENSSL_sk_delete_ptr(ossl_check_X509_CRL_sk_type(sk), ossl_check_X509_CRL_type(ptr)))
#define sk_X509_CRL_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_CRL_sk_type(sk),

```
ossl_check_X509_CRL_type(ptr))
#define sk_X509_CRL_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_CRL_sk_type(sk),
ossl_check_X509_CRL_type(ptr))
#define sk_X509_CRL_pop(sk) ((X509_CRL *)OPENSSL_sk_pop(ossl_check_X509_CRL_sk_type(sk)))
#define sk_X509_CRL_shift(sk) ((X509_CRL *)OPENSSL_sk_shift(ossl_check_X509_CRL_sk_type(sk)))
#define sk_X509_CRL_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_CRL_sk_type(sk),ossl_check_X509_CRL_freefunc_type(freefunc))
#define sk_X509_CRL_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_CRL_sk_type(sk),
ossl_check_X509_CRL_type(ptr), (idx))
#define sk_X509_CRL_set(sk, idx, ptr) ((X509_CRL *)OPENSSL_sk_set(ossl_check_X509_CRL_sk_type(sk),
(idx), ossl_check_X509_CRL_type(ptr)))
#define sk_X509_CRL_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_CRL_sk_type(sk),
 ossl_check_X509_CRL_type(ptr))
#define sk_X509_CRL_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_CRL_sk_type(sk),
ossl_check_X509_CRL_type(ptr))
#define sk_X509_CRL_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_X509_CRL_sk_type(sk),
ossl_check_X509_CRL_type(ptr), pnum)
#define sk_X509_CRL_sort(sk) OPENSSL_sk_sort(ossl_check_X509_CRL_sk_type(sk))
#define sk_X509_CRL_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_X509_CRL_sk_type(sk))
#define sk_X509_CRL_dup(sk) ((STACK_OF(X509_CRL)
*)OPENSSL_sk_dup(ossl_check_const_X509_CRL_sk_type(sk)))
#define sk_X509_CRL_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_CRL)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_CRL_sk_type(sk),
ossl_check_X509_CRL_copyfunc_type(copyfunc), ossl_check_X509_CRL_freefunc_type(freefunc)))
#define sk_X509_CRL_set_cmp_func(sk, cmp)
((sk_X509_CRL_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_CRL_sk_type(sk),
ossl_check_X509_CRL_compfunc_type(cmp)))


/* Flags for X509_get_signature_info()
 */
/* Signature info is valid */
# define X509_SIG_INFO_VALID     0x1
/* Signature is suitable for TLS use */
# define X509_SIG_INFO_TLS       0x2

# define X509_FILETYPE_PEM       1
# define X509_FILETYPE_ASN1      2
# define X509_FILETYPE_DEFAULT   3

# define X509v3_KU_DIGITAL_SIGNATURE     0x0080
# define X509v3_KU_NON_REPUDIATION       0x0040
# define X509v3_KU_KEY_ENCIPHERMENT      0x0020
# define X509v3_KU_DATA_ENCIPHERMENT     0x0010
# define X509v3_KU_KEY_AGREEMENT         0x0008
# define X509v3_KU_KEY_CERT_SIGN         0x0004
# define X509v3_KU_CRL_SIGN              0x0002
# define X509v3_KU_ENCIPHER_ONLY         0x0001
```

```
# define X509v3_KU_DECIPHER_ONLY        0x8000
# define X509v3_KU_UNDEF                0xffff

struct X509_algor_st {
   ASN1_OBJECT *algorithm;
   ASN1_TYPE *parameter;
} /* X509_ALGOR */ ;

typedef STACK_OF(X509_ALGOR) X509_ALGORS;

typedef struct X509_val_st {
   ASN1_TIME *notBefore;
   ASN1_TIME *notAfter;
} X509_VAL;

typedef struct X509_sig_st
 X509_SIG;

typedef struct X509_name_entry_st X509_NAME_ENTRY;

SKM_DEFINE_STACK_OF_INTERNAL(X509_NAME_ENTRY, X509_NAME_ENTRY,
X509_NAME_ENTRY)
#define sk_X509_NAME_ENTRY_num(sk)
OPENSSL_sk_num(ossl_check_const_X509_NAME_ENTRY_sk_type(sk))
#define sk_X509_NAME_ENTRY_value(sk, idx) ((X509_NAME_ENTRY
*)OPENSSL_sk_value(ossl_check_const_X509_NAME_ENTRY_sk_type(sk), (idx)))
#define sk_X509_NAME_ENTRY_new(cmp) ((STACK_OF(X509_NAME_ENTRY)
*)OPENSSL_sk_new(ossl_check_X509_NAME_ENTRY_compfunc_type(cmp)))
#define sk_X509_NAME_ENTRY_new_null() ((STACK_OF(X509_NAME_ENTRY)
*)OPENSSL_sk_new_null())
#define sk_X509_NAME_ENTRY_new_reserve(cmp, n) ((STACK_OF(X509_NAME_ENTRY)
*)OPENSSL_sk_new_reserve(ossl_check_X509_NAME_ENTRY_compfunc_type(cmp), (n)))
#define sk_X509_NAME_ENTRY_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_X509_NAME_ENTRY_sk_type(sk), (n))
#define sk_X509_NAME_ENTRY_free(sk) OPENSSL_sk_free(ossl_check_X509_NAME_ENTRY_sk_type(sk))
#define sk_X509_NAME_ENTRY_zero(sk) OPENSSL_sk_zero(ossl_check_X509_NAME_ENTRY_sk_type(sk))
#define
 sk_X509_NAME_ENTRY_delete(sk, i) ((X509_NAME_ENTRY
*)OPENSSL_sk_delete(ossl_check_X509_NAME_ENTRY_sk_type(sk), (i)))
#define sk_X509_NAME_ENTRY_delete_ptr(sk, ptr) ((X509_NAME_ENTRY
*)OPENSSL_sk_delete_ptr(ossl_check_X509_NAME_ENTRY_sk_type(sk),
ossl_check_X509_NAME_ENTRY_type(ptr)))
#define sk_X509_NAME_ENTRY_push(sk, ptr)
OPENSSL_sk_push(ossl_check_X509_NAME_ENTRY_sk_type(sk),
ossl_check_X509_NAME_ENTRY_type(ptr))
#define sk_X509_NAME_ENTRY_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_X509_NAME_ENTRY_sk_type(sk),
ossl_check_X509_NAME_ENTRY_type(ptr))
```

```
#define sk_X509_NAME_ENTRY_pop(sk) ((X509_NAME_ENTRY
*)OPENSSL_sk_pop(ossl_check_X509_NAME_ENTRY_sk_type(sk)))
#define sk_X509_NAME_ENTRY_shift(sk) ((X509_NAME_ENTRY
*)OPENSSL_sk_shift(ossl_check_X509_NAME_ENTRY_sk_type(sk)))
#define sk_X509_NAME_ENTRY_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_NAME_ENTRY_sk_type(sk),ossl_check_X509_NAME_ENTRY_freef
unc_type(freefunc))
#define sk_X509_NAME_ENTRY_insert(sk,
 ptr, idx) OPENSSL_sk_insert(ossl_check_X509_NAME_ENTRY_sk_type(sk),
ossl_check_X509_NAME_ENTRY_type(ptr), (idx))
#define sk_X509_NAME_ENTRY_set(sk, idx, ptr) ((X509_NAME_ENTRY
*)OPENSSL_sk_set(ossl_check_X509_NAME_ENTRY_sk_type(sk), (idx),
ossl_check_X509_NAME_ENTRY_type(ptr)))
#define sk_X509_NAME_ENTRY_find(sk, ptr)
OPENSSL_sk_find(ossl_check_X509_NAME_ENTRY_sk_type(sk),
ossl_check_X509_NAME_ENTRY_type(ptr))
#define sk_X509_NAME_ENTRY_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_X509_NAME_ENTRY_sk_type(sk),
ossl_check_X509_NAME_ENTRY_type(ptr))
#define sk_X509_NAME_ENTRY_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_NAME_ENTRY_sk_type(sk),
ossl_check_X509_NAME_ENTRY_type(ptr), pnum)
#define sk_X509_NAME_ENTRY_sort(sk) OPENSSL_sk_sort(ossl_check_X509_NAME_ENTRY_sk_type(sk))
#define sk_X509_NAME_ENTRY_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509_NAME_ENTRY_sk_type(sk))
#define sk_X509_NAME_ENTRY_dup(sk) ((STACK_OF(X509_NAME_ENTRY)
 *)OPENSSL_sk_dup(ossl_check_const_X509_NAME_ENTRY_sk_type(sk)))
#define sk_X509_NAME_ENTRY_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_NAME_ENTRY)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_NAME_ENTRY_sk_type(sk),
ossl_check_X509_NAME_ENTRY_copyfunc_type(copyfunc),
ossl_check_X509_NAME_ENTRY_freefunc_type(freefunc)))
#define sk_X509_NAME_ENTRY_set_cmp_func(sk, cmp)
((sk_X509_NAME_ENTRY_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_NAME_ENTRY_sk_type
(sk), ossl_check_X509_NAME_ENTRY_compfunc_type(cmp)))


# define X509_EX_V_NETSCAPE_HACK        0x8000
# define X509_EX_V_INIT                 0x0001
typedef struct X509_extension_st X509_EXTENSION;
SKM_DEFINE_STACK_OF_INTERNAL(X509_EXTENSION, X509_EXTENSION, X509_EXTENSION)
#define sk_X509_EXTENSION_num(sk) OPENSSL_sk_num(ossl_check_const_X509_EXTENSION_sk_type(sk))
#define sk_X509_EXTENSION_value(sk, idx) ((X509_EXTENSION
*)OPENSSL_sk_value(ossl_check_const_X509_EXTENSION_sk_type(sk), (idx)))
#define sk_X509_EXTENSION_new(cmp)
 ((STACK_OF(X509_EXTENSION)
*)OPENSSL_sk_new(ossl_check_X509_EXTENSION_compfunc_type(cmp)))
#define sk_X509_EXTENSION_new_null() ((STACK_OF(X509_EXTENSION) *)OPENSSL_sk_new_null())
#define sk_X509_EXTENSION_new_reserve(cmp, n) ((STACK_OF(X509_EXTENSION)
```

*)OPENSSL_sk_new_reserve(ossl_check_X509_EXTENSION_compfunc_type(cmp), (n)))
#define sk_X509_EXTENSION_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_X509_EXTENSION_sk_type(sk), (n))
#define sk_X509_EXTENSION_free(sk) OPENSSL_sk_free(ossl_check_X509_EXTENSION_sk_type(sk))
#define sk_X509_EXTENSION_zero(sk) OPENSSL_sk_zero(ossl_check_X509_EXTENSION_sk_type(sk))
#define sk_X509_EXTENSION_delete(sk, i) ((X509_EXTENSION
*)OPENSSL_sk_delete(ossl_check_X509_EXTENSION_sk_type(sk), (i)))
#define sk_X509_EXTENSION_delete_ptr(sk, ptr) ((X509_EXTENSION
*)OPENSSL_sk_delete_ptr(ossl_check_X509_EXTENSION_sk_type(sk),
ossl_check_X509_EXTENSION_type(ptr)))
#define sk_X509_EXTENSION_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_EXTENSION_sk_type(sk),
ossl_check_X509_EXTENSION_type(ptr))
#define
sk_X509_EXTENSION_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_EXTENSION_sk_type(sk),
ossl_check_X509_EXTENSION_type(ptr))
#define sk_X509_EXTENSION_pop(sk) ((X509_EXTENSION
*)OPENSSL_sk_pop(ossl_check_X509_EXTENSION_sk_type(sk)))
#define sk_X509_EXTENSION_shift(sk) ((X509_EXTENSION
*)OPENSSL_sk_shift(ossl_check_X509_EXTENSION_sk_type(sk)))
#define sk_X509_EXTENSION_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_EXTENSION_sk_type(sk),ossl_check_X509_EXTENSION_freefunc_t
ype(freefunc))
#define sk_X509_EXTENSION_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_X509_EXTENSION_sk_type(sk), ossl_check_X509_EXTENSION_type(ptr),
(idx))
#define sk_X509_EXTENSION_set(sk, idx, ptr) ((X509_EXTENSION
*)OPENSSL_sk_set(ossl_check_X509_EXTENSION_sk_type(sk), (idx),
ossl_check_X509_EXTENSION_type(ptr)))
#define sk_X509_EXTENSION_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_EXTENSION_sk_type(sk),
ossl_check_X509_EXTENSION_type(ptr))
#define
sk_X509_EXTENSION_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_EXTENSION_sk_type(sk),
ossl_check_X509_EXTENSION_type(ptr))
#define sk_X509_EXTENSION_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_EXTENSION_sk_type(sk), ossl_check_X509_EXTENSION_type(ptr),
pnum)
#define sk_X509_EXTENSION_sort(sk) OPENSSL_sk_sort(ossl_check_X509_EXTENSION_sk_type(sk))
#define sk_X509_EXTENSION_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509_EXTENSION_sk_type(sk))
#define sk_X509_EXTENSION_dup(sk) ((STACK_OF(X509_EXTENSION)
*)OPENSSL_sk_dup(ossl_check_const_X509_EXTENSION_sk_type(sk)))
#define sk_X509_EXTENSION_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_EXTENSION)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_EXTENSION_sk_type(sk),
ossl_check_X509_EXTENSION_copyfunc_type(copyfunc),
ossl_check_X509_EXTENSION_freefunc_type(freefunc)))
#define sk_X509_EXTENSION_set_cmp_func(sk, cmp)
((sk_X509_EXTENSION_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_EXTENSION_sk_type(sk),

ossl_check_X509_EXTENSION_compfunc_type(cmp)))

typedef STACK_OF(X509_EXTENSION) X509_EXTENSIONS;
typedef struct x509_attributes_st X509_ATTRIBUTE;
SKM_DEFINE_STACK_OF_INTERNAL(X509_ATTRIBUTE, X509_ATTRIBUTE, X509_ATTRIBUTE)
#define sk_X509_ATTRIBUTE_num(sk) OPENSSL_sk_num(ossl_check_const_X509_ATTRIBUTE_sk_type(sk))
#define sk_X509_ATTRIBUTE_value(sk, idx) ((X509_ATTRIBUTE
*)OPENSSL_sk_value(ossl_check_const_X509_ATTRIBUTE_sk_type(sk), (idx)))
#define sk_X509_ATTRIBUTE_new(cmp) ((STACK_OF(X509_ATTRIBUTE)
*)OPENSSL_sk_new(ossl_check_X509_ATTRIBUTE_compfunc_type(cmp)))
#define sk_X509_ATTRIBUTE_new_null() ((STACK_OF(X509_ATTRIBUTE) *)OPENSSL_sk_new_null())
#define sk_X509_ATTRIBUTE_new_reserve(cmp, n) ((STACK_OF(X509_ATTRIBUTE)
*)OPENSSL_sk_new_reserve(ossl_check_X509_ATTRIBUTE_compfunc_type(cmp), (n)))
#define sk_X509_ATTRIBUTE_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_X509_ATTRIBUTE_sk_type(sk), (n))
#define sk_X509_ATTRIBUTE_free(sk) OPENSSL_sk_free(ossl_check_X509_ATTRIBUTE_sk_type(sk))
#define
sk_X509_ATTRIBUTE_zero(sk) OPENSSL_sk_zero(ossl_check_X509_ATTRIBUTE_sk_type(sk))
#define sk_X509_ATTRIBUTE_delete(sk, i) ((X509_ATTRIBUTE
*)OPENSSL_sk_delete(ossl_check_X509_ATTRIBUTE_sk_type(sk), (i)))
#define sk_X509_ATTRIBUTE_delete_ptr(sk, ptr) ((X509_ATTRIBUTE
*)OPENSSL_sk_delete_ptr(ossl_check_X509_ATTRIBUTE_sk_type(sk),
ossl_check_X509_ATTRIBUTE_type(ptr)))
#define sk_X509_ATTRIBUTE_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_ATTRIBUTE_sk_type(sk),
ossl_check_X509_ATTRIBUTE_type(ptr))
#define sk_X509_ATTRIBUTE_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_X509_ATTRIBUTE_sk_type(sk), ossl_check_X509_ATTRIBUTE_type(ptr))
#define sk_X509_ATTRIBUTE_pop(sk) ((X509_ATTRIBUTE
*)OPENSSL_sk_pop(ossl_check_X509_ATTRIBUTE_sk_type(sk)))
#define sk_X509_ATTRIBUTE_shift(sk) ((X509_ATTRIBUTE
*)OPENSSL_sk_shift(ossl_check_X509_ATTRIBUTE_sk_type(sk)))
#define sk_X509_ATTRIBUTE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_ATTRIBUTE_sk_type(sk),ossl_check_X509_ATTRIBUTE_freefunc_t
ype(freefunc))
#define
sk_X509_ATTRIBUTE_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_ATTRIBUTE_sk_type(sk),
ossl_check_X509_ATTRIBUTE_type(ptr), (idx))
#define sk_X509_ATTRIBUTE_set(sk, idx, ptr) ((X509_ATTRIBUTE
*)OPENSSL_sk_set(ossl_check_X509_ATTRIBUTE_sk_type(sk), (idx),
ossl_check_X509_ATTRIBUTE_type(ptr)))
#define sk_X509_ATTRIBUTE_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_ATTRIBUTE_sk_type(sk),
ossl_check_X509_ATTRIBUTE_type(ptr))
#define sk_X509_ATTRIBUTE_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_X509_ATTRIBUTE_sk_type(sk), ossl_check_X509_ATTRIBUTE_type(ptr))
#define sk_X509_ATTRIBUTE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_ATTRIBUTE_sk_type(sk), ossl_check_X509_ATTRIBUTE_type(ptr),
pnum)
#define sk_X509_ATTRIBUTE_sort(sk) OPENSSL_sk_sort(ossl_check_X509_ATTRIBUTE_sk_type(sk))

```
#define sk_X509_ATTRIBUTE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509_ATTRIBUTE_sk_type(sk))
#define sk_X509_ATTRIBUTE_dup(sk) ((STACK_OF(X509_ATTRIBUTE)
 *)OPENSSL_sk_dup(ossl_check_const_X509_ATTRIBUTE_sk_type(sk)))
#define sk_X509_ATTRIBUTE_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_ATTRIBUTE)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_ATTRIBUTE_sk_type(sk),
ossl_check_X509_ATTRIBUTE_copyfunc_type(copyfunc),
ossl_check_X509_ATTRIBUTE_freefunc_type(freefunc)))
#define sk_X509_ATTRIBUTE_set_cmp_func(sk, cmp)
((sk_X509_ATTRIBUTE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_ATTRIBUTE_sk_type(sk),
ossl_check_X509_ATTRIBUTE_compfunc_type(cmp)))

typedef struct X509_req_info_st X509_REQ_INFO;
typedef struct X509_req_st X509_REQ;
typedef struct x509_cert_aux_st X509_CERT_AUX;
typedef struct x509_cinf_st X509_CINF;

/* Flags for X509_print_ex() */

# define X509_FLAG_COMPAT              0
# define X509_FLAG_NO_HEADER           1L
# define X509_FLAG_NO_VERSION          (1L << 1)
# define X509_FLAG_NO_SERIAL           (1L << 2)
# define X509_FLAG_NO_SIGNAME          (1L << 3)
# define X509_FLAG_NO_ISSUER
          (1L << 4)
# define X509_FLAG_NO_VALIDITY         (1L << 5)
# define X509_FLAG_NO_SUBJECT          (1L << 6)
# define X509_FLAG_NO_PUBKEY           (1L << 7)
# define X509_FLAG_NO_EXTENSIONS       (1L << 8)
# define X509_FLAG_NO_SIGDUMP          (1L << 9)
# define X509_FLAG_NO_AUX              (1L << 10)
# define X509_FLAG_NO_ATTRIBUTES       (1L << 11)
# define X509_FLAG_NO_IDS              (1L << 12)
# define X509_FLAG_EXTENSIONS_ONLY_KID   (1L << 13)

/* Flags specific to X509_NAME_print_ex() */

/* The field separator information */

# define XN_FLAG_SEP_MASK       (0xf << 16)

# define XN_FLAG_COMPAT         0/* Traditional; use old X509_NAME_print */
# define XN_FLAG_SEP_COMMA_PLUS  (1 << 16)/* RFC2253 ,+ */
# define XN_FLAG_SEP_CPLUS_SPC   (2 << 16)/* ,+ spaced: more readable */
# define XN_FLAG_SEP_SPLUS_SPC   (3 << 16)/* ;+ spaced */
# define XN_FLAG_SEP_MULTILINE   (4 << 16)/* One line per field */
```

```
# define XN_FLAG_DN_REV          (1 << 20)/*
 Reverse DN order */

/* How the field name is shown */

# define XN_FLAG_FN_MASK         (0x3 << 21)

# define XN_FLAG_FN_SN           0/* Object short name */
# define XN_FLAG_FN_LN           (1 << 21)/* Object long name */
# define XN_FLAG_FN_OID          (2 << 21)/* Always use OIDs */
# define XN_FLAG_FN_NONE         (3 << 21)/* No field names */

# define XN_FLAG_SPC_EQ          (1 << 23)/* Put spaces round '=' */

/*
* This determines if we dump fields we don't recognise: RFC2253 requires
* this.
*/

# define XN_FLAG_DUMP_UNKNOWN_FIELDS (1 << 24)

# define XN_FLAG_FN_ALIGN        (1 << 25)/* Align field names to 20
                                 * characters */

/* Complete set of RFC2253 flags */

# define XN_FLAG_RFC2253 (ASN1_STRFLGS_RFC2253 | \
                    XN_FLAG_SEP_COMMA_PLUS | \
                    XN_FLAG_DN_REV | \
                    XN_FLAG_FN_SN | \
                    XN_FLAG_DUMP_UNKNOWN_FIELDS)

/* readable oneline form */

#
 define XN_FLAG_ONELINE (ASN1_STRFLGS_RFC2253 | \
                    ASN1_STRFLGS_ESC_QUOTE | \
                    XN_FLAG_SEP_CPLUS_SPC | \
                    XN_FLAG_SPC_EQ | \
                    XN_FLAG_FN_SN)

/* readable multiline form */

# define XN_FLAG_MULTILINE (ASN1_STRFLGS_ESC_CTRL | \
                    ASN1_STRFLGS_ESC_MSB | \
                    XN_FLAG_SEP_MULTILINE | \
                    XN_FLAG_SPC_EQ | \
                    XN_FLAG_FN_LN | \
```

```
                XN_FLAG_FN_ALIGN)

typedef struct X509_crl_info_st X509_CRL_INFO;

typedef struct private_key_st {
  int version;
  /* The PKCS#8 data types */
  X509_ALGOR *enc_algor;
  ASN1_OCTET_STRING *enc_pkey; /* encrypted pub key */
  /* When decrypted, the following will not be NULL */
  EVP_PKEY *dec_pkey;
  /* used to encrypt and decrypt */
  int key_length;
  char *key_data;
  int key_free;             /* true if we should auto free key_data */
  /*
 expanded version of 'enc_algor' */
  EVP_CIPHER_INFO cipher;
} X509_PKEY;

typedef struct X509_info_st {
  X509 *x509;
  X509_CRL *crl;
  X509_PKEY *x_pkey;
  EVP_CIPHER_INFO enc_cipher;
  int enc_len;
  char *enc_data;
} X509_INFO;
SKM_DEFINE_STACK_OF_INTERNAL(X509_INFO, X509_INFO, X509_INFO)
#define sk_X509_INFO_num(sk) OPENSSL_sk_num(ossl_check_const_X509_INFO_sk_type(sk))
#define sk_X509_INFO_value(sk, idx) ((X509_INFO
*)OPENSSL_sk_value(ossl_check_const_X509_INFO_sk_type(sk), (idx)))
#define sk_X509_INFO_new(cmp) ((STACK_OF(X509_INFO)
*)OPENSSL_sk_new(ossl_check_X509_INFO_compfunc_type(cmp)))
#define sk_X509_INFO_new_null() ((STACK_OF(X509_INFO) *)OPENSSL_sk_new_null())
#define sk_X509_INFO_new_reserve(cmp, n) ((STACK_OF(X509_INFO)
*)OPENSSL_sk_new_reserve(ossl_check_X509_INFO_compfunc_type(cmp), (n)))
#define sk_X509_INFO_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_INFO_sk_type(sk), (n))
#define sk_X509_INFO_free(sk) OPENSSL_sk_free(ossl_check_X509_INFO_sk_type(sk))
#define
 sk_X509_INFO_zero(sk) OPENSSL_sk_zero(ossl_check_X509_INFO_sk_type(sk))
#define sk_X509_INFO_delete(sk, i) ((X509_INFO *)OPENSSL_sk_delete(ossl_check_X509_INFO_sk_type(sk),
(i)))
#define sk_X509_INFO_delete_ptr(sk, ptr) ((X509_INFO
*)OPENSSL_sk_delete_ptr(ossl_check_X509_INFO_sk_type(sk), ossl_check_X509_INFO_type(ptr)))
#define sk_X509_INFO_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_INFO_sk_type(sk),
ossl_check_X509_INFO_type(ptr))
#define sk_X509_INFO_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_INFO_sk_type(sk),
```

```
ossl_check_X509_INFO_type(ptr))
#define sk_X509_INFO_pop(sk) ((X509_INFO *)OPENSSL_sk_pop(ossl_check_X509_INFO_sk_type(sk)))
#define sk_X509_INFO_shift(sk) ((X509_INFO *)OPENSSL_sk_shift(ossl_check_X509_INFO_sk_type(sk)))
#define sk_X509_INFO_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_INFO_sk_type(sk),ossl_check_X509_INFO_freefunc_type(freefunc))
#define sk_X509_INFO_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_INFO_sk_type(sk),
 ossl_check_X509_INFO_type(ptr), (idx))
#define sk_X509_INFO_set(sk, idx, ptr) ((X509_INFO *)OPENSSL_sk_set(ossl_check_X509_INFO_sk_type(sk),
(idx), ossl_check_X509_INFO_type(ptr)))
#define sk_X509_INFO_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_INFO_sk_type(sk),
ossl_check_X509_INFO_type(ptr))
#define sk_X509_INFO_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_INFO_sk_type(sk),
ossl_check_X509_INFO_type(ptr))
#define sk_X509_INFO_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_X509_INFO_sk_type(sk),
ossl_check_X509_INFO_type(ptr), pnum)
#define sk_X509_INFO_sort(sk) OPENSSL_sk_sort(ossl_check_X509_INFO_sk_type(sk))
#define sk_X509_INFO_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_X509_INFO_sk_type(sk))
#define sk_X509_INFO_dup(sk) ((STACK_OF(X509_INFO)
*)OPENSSL_sk_dup(ossl_check_const_X509_INFO_sk_type(sk)))
#define sk_X509_INFO_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_INFO)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_INFO_sk_type(sk),
ossl_check_X509_INFO_copyfunc_type(copyfunc),
 ossl_check_X509_INFO_freefunc_type(freefunc)))
#define sk_X509_INFO_set_cmp_func(sk, cmp)
((sk_X509_INFO_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_INFO_sk_type(sk),
ossl_check_X509_INFO_compfunc_type(cmp)))


/*
* The next 2 structures and their 8 routines are used to manipulate Netscape's
* spki structures - useful if you are writing a CA web page
*/
typedef struct Netscape_spkac_st {
  X509_PUBKEY *pubkey;
  ASN1_IA5STRING *challenge;  /* challenge sent in atlas >= PR2 */
} NETSCAPE_SPKAC;

typedef struct Netscape_spki_st {
  NETSCAPE_SPKAC *spkac;      /* signed public key and challenge */
  X509_ALGOR sig_algor;
  ASN1_BIT_STRING *signature;
} NETSCAPE_SPKI;

/* Netscape certificate sequence structure */
typedef struct Netscape_certificate_sequence {
  ASN1_OBJECT *type;
  STACK_OF(X509) *certs;
} NETSCAPE_CERT_SEQUENCE;
```

```
/*- Unused (and iv length is wrong)
typedef struct CBCParameter_st
      {
      unsigned char iv[8];
       } CBC_PARAM;
*/

/* Password based encryption structure */

typedef struct PBEPARAM_st {
  ASN1_OCTET_STRING *salt;
  ASN1_INTEGER *iter;
} PBEPARAM;

/* Password based encryption V2 structures */

typedef struct PBE2PARAM_st {
  X509_ALGOR *keyfunc;
  X509_ALGOR *encryption;
} PBE2PARAM;

typedef struct PBKDF2PARAM_st {
/* Usually OCTET STRING but could be anything */
  ASN1_TYPE *salt;
  ASN1_INTEGER *iter;
  ASN1_INTEGER *keylength;
  X509_ALGOR *prf;
} PBKDF2PARAM;

#ifndef OPENSSL_NO_SCRYPT
typedef struct SCRYPT_PARAMS_st {
  ASN1_OCTET_STRING *salt;
  ASN1_INTEGER *costParameter;
  ASN1_INTEGER *blockSize;
  ASN1_INTEGER *parallelizationParameter;
  ASN1_INTEGER *keyLength;
} SCRYPT_PARAMS;
#endif

#ifdef  __cplusplus
}
#endif

# include <openssl/x509_vfy.h>
# include <openssl/pkcs7.h>

#ifdef  __cplusplus
```

```
extern "C" {
#endif

# define X509_EXT_PACK_UNKNOWN   1
# define X509_EXT_PACK_STRING    2

# define        X509_extract_key(x)     X509_get_pubkey(x)/*****/
#
 define        X509_REQ_extract_key(a) X509_REQ_get_pubkey(a)
# define        X509_name_cmp(a,b)      X509_NAME_cmp((a),(b))

void X509_CRL_set_default_method(const X509_CRL_METHOD *meth);
X509_CRL_METHOD *X509_CRL_METHOD_new(int (*crl_init) (X509_CRL *crl),
                                     int (*crl_free) (X509_CRL *crl),
                                     int (*crl_lookup) (X509_CRL *crl,
                                                        X509_REVOKED **ret,
                                                        const
                                                        ASN1_INTEGER *serial,
                                                        const
                                                        X509_NAME *issuer),
                                     int (*crl_verify) (X509_CRL *crl,
                                                        EVP_PKEY *pk));
void X509_CRL_METHOD_free(X509_CRL_METHOD *m);

void X509_CRL_set_meth_data(X509_CRL
 *crl, void *dat);
void *X509_CRL_get_meth_data(X509_CRL *crl);

const char *X509_verify_cert_error_string(long n);

int X509_verify(X509 *a, EVP_PKEY *r);
int X509_self_signed(X509 *cert, int verify_signature);

int X509_REQ_verify_ex(X509_REQ *a, EVP_PKEY *r, OSSL_LIB_CTX *libctx,
                       const char *propq);
int X509_REQ_verify(X509_REQ *a, EVP_PKEY *r);
int X509_CRL_verify(X509_CRL *a, EVP_PKEY *r);
int NETSCAPE_SPKI_verify(NETSCAPE_SPKI *a, EVP_PKEY *r);

NETSCAPE_SPKI *NETSCAPE_SPKI_b64_decode(const char *str, int len);
char *NETSCAPE_SPKI_b64_encode(NETSCAPE_SPKI *x);
EVP_PKEY *NETSCAPE_SPKI_get_pubkey(NETSCAPE_SPKI *x);
int NETSCAPE_SPKI_set_pubkey(NETSCAPE_SPKI *x, EVP_PKEY *pkey);

int NETSCAPE_SPKI_print(BIO *out, NETSCAPE_SPKI *spki);

int X509_signature_dump(BIO *bp, const ASN1_STRING *sig, int indent);
int X509_signature_print(BIO *bp, const X509_ALGOR *alg,
```

```
                const ASN1_STRING *sig);

int X509_sign(X509 *x, EVP_PKEY *pkey, const EVP_MD
 *md);
int X509_sign_ctx(X509 *x, EVP_MD_CTX *ctx);
int X509_REQ_sign(X509_REQ *x, EVP_PKEY *pkey, const EVP_MD *md);
int X509_REQ_sign_ctx(X509_REQ *x, EVP_MD_CTX *ctx);
int X509_CRL_sign(X509_CRL *x, EVP_PKEY *pkey, const EVP_MD *md);
int X509_CRL_sign_ctx(X509_CRL *x, EVP_MD_CTX *ctx);
int NETSCAPE_SPKI_sign(NETSCAPE_SPKI *x, EVP_PKEY *pkey, const EVP_MD *md);

int X509_pubkey_digest(const X509 *data, const EVP_MD *type,
                unsigned char *md, unsigned int *len);
int X509_digest(const X509 *data, const EVP_MD *type,
            unsigned char *md, unsigned int *len);
ASN1_OCTET_STRING *X509_digest_sig(const X509 *cert,
                        EVP_MD **md_used, int *md_is_fallback);
int X509_CRL_digest(const X509_CRL *data, const EVP_MD *type,
              unsigned char *md, unsigned int *len);
int X509_REQ_digest(const X509_REQ *data, const EVP_MD *type,
              unsigned char *md, unsigned int *len);
int X509_NAME_digest(const
 X509_NAME *data, const EVP_MD *type,
              unsigned char *md, unsigned int *len);

X509 *X509_load_http(const char *url, BIO *bio, BIO *rbio, int timeout);
X509_CRL *X509_CRL_load_http(const char *url, BIO *bio, BIO *rbio, int timeout);
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  include <openssl/http.h> /* OSSL_HTTP_REQ_CTX_nbio_d2i */
#  define X509_http_nbio(rctx, pcert) \
    OSSL_HTTP_REQ_CTX_nbio_d2i(rctx, pcert, ASN1_ITEM_rptr(X509))
#  define X509_CRL_http_nbio(rctx, pcrl) \
    OSSL_HTTP_REQ_CTX_nbio_d2i(rctx, pcrl, ASN1_ITEM_rptr(X509_CRL))
# endif

# ifndef OPENSSL_NO_STDIO
X509 *d2i_X509_fp(FILE *fp, X509 **x509);
int i2d_X509_fp(FILE *fp, const X509 *x509);
X509_CRL *d2i_X509_CRL_fp(FILE *fp, X509_CRL **crl);
int i2d_X509_CRL_fp(FILE *fp, const X509_CRL *crl);
X509_REQ *d2i_X509_REQ_fp(FILE *fp, X509_REQ **req);
int i2d_X509_REQ_fp(FILE *fp, const X509_REQ *req);
#  ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 RSA *d2i_RSAPrivateKey_fp(FILE *fp, RSA
 **rsa);
OSSL_DEPRECATEDIN_3_0 int i2d_RSAPrivateKey_fp(FILE *fp, const RSA *rsa);
OSSL_DEPRECATEDIN_3_0 RSA *d2i_RSAPublicKey_fp(FILE *fp, RSA **rsa);
OSSL_DEPRECATEDIN_3_0 int i2d_RSAPublicKey_fp(FILE *fp, const RSA *rsa);
```

```
OSSL_DEPRECATEDIN_3_0 RSA *d2i_RSA_PUBKEY_fp(FILE *fp, RSA **rsa);
OSSL_DEPRECATEDIN_3_0 int i2d_RSA_PUBKEY_fp(FILE *fp, const RSA *rsa);
#  endif
#  ifndef OPENSSL_NO_DEPRECATED_3_0
#   ifndef OPENSSL_NO_DSA
OSSL_DEPRECATEDIN_3_0 DSA *d2i_DSA_PUBKEY_fp(FILE *fp, DSA **dsa);
OSSL_DEPRECATEDIN_3_0 int i2d_DSA_PUBKEY_fp(FILE *fp, const DSA *dsa);
OSSL_DEPRECATEDIN_3_0 DSA *d2i_DSAPrivateKey_fp(FILE *fp, DSA **dsa);
OSSL_DEPRECATEDIN_3_0 int i2d_DSAPrivateKey_fp(FILE *fp, const DSA *dsa);
#   endif
#  endif
#  ifndef OPENSSL_NO_DEPRECATED_3_0
#   ifndef OPENSSL_NO_EC
OSSL_DEPRECATEDIN_3_0 EC_KEY *d2i_EC_PUBKEY_fp(FILE *fp, EC_KEY **eckey);
OSSL_DEPRECATEDIN_3_0 int i2d_EC_PUBKEY_fp(FILE *fp, const EC_KEY *eckey);
OSSL_DEPRECATEDIN_3_0 EC_KEY *d2i_ECPrivateKey_fp(FILE *fp,
 EC_KEY **eckey);
OSSL_DEPRECATEDIN_3_0 int i2d_ECPrivateKey_fp(FILE *fp, const EC_KEY *eckey);
#   endif /* OPENSSL_NO_EC */
#  endif /* OPENSSL_NO_DEPRECATED_3_0 */
X509_SIG *d2i_PKCS8_fp(FILE *fp, X509_SIG **p8);
int i2d_PKCS8_fp(FILE *fp, const X509_SIG *p8);
X509_PUBKEY *d2i_X509_PUBKEY_fp(FILE *fp, X509_PUBKEY **xpk);
int i2d_X509_PUBKEY_fp(FILE *fp, const X509_PUBKEY *xpk);
PKCS8_PRIV_KEY_INFO *d2i_PKCS8_PRIV_KEY_INFO_fp(FILE *fp,
                                PKCS8_PRIV_KEY_INFO **p8inf);
int i2d_PKCS8_PRIV_KEY_INFO_fp(FILE *fp, const PKCS8_PRIV_KEY_INFO *p8inf);
int i2d_PKCS8PrivateKeyInfo_fp(FILE *fp, const EVP_PKEY *key);
int i2d_PrivateKey_fp(FILE *fp, const EVP_PKEY *pkey);
EVP_PKEY *d2i_PrivateKey_ex_fp(FILE *fp, EVP_PKEY **a, OSSL_LIB_CTX *libctx,
                       const char *propq);
EVP_PKEY *d2i_PrivateKey_fp(FILE *fp, EVP_PKEY **a);
int i2d_PUBKEY_fp(FILE *fp, const EVP_PKEY *pkey);
EVP_PKEY *d2i_PUBKEY_fp(FILE *fp, EVP_PKEY **a);
#
 endif

X509 *d2i_X509_bio(BIO *bp, X509 **x509);
int i2d_X509_bio(BIO *bp, const X509 *x509);
X509_CRL *d2i_X509_CRL_bio(BIO *bp, X509_CRL **crl);
int i2d_X509_CRL_bio(BIO *bp, const X509_CRL *crl);
X509_REQ *d2i_X509_REQ_bio(BIO *bp, X509_REQ **req);
int i2d_X509_REQ_bio(BIO *bp, const X509_REQ *req);
#  ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 RSA *d2i_RSAPrivateKey_bio(BIO *bp, RSA **rsa);
OSSL_DEPRECATEDIN_3_0 int i2d_RSAPrivateKey_bio(BIO *bp, const RSA *rsa);
OSSL_DEPRECATEDIN_3_0 RSA *d2i_RSAPublicKey_bio(BIO *bp, RSA **rsa);
OSSL_DEPRECATEDIN_3_0 int i2d_RSAPublicKey_bio(BIO *bp, const RSA *rsa);
```

```
OSSL_DEPRECATEDIN_3_0 RSA *d2i_RSA_PUBKEY_bio(BIO *bp, RSA **rsa);
OSSL_DEPRECATEDIN_3_0 int i2d_RSA_PUBKEY_bio(BIO *bp, const RSA *rsa);
#  endif
#  ifndef OPENSSL_NO_DEPRECATED_3_0
#   ifndef OPENSSL_NO_DSA
OSSL_DEPRECATEDIN_3_0 DSA *d2i_DSA_PUBKEY_bio(BIO *bp, DSA **dsa);
OSSL_DEPRECATEDIN_3_0 int i2d_DSA_PUBKEY_bio(BIO *bp, const DSA *dsa);
OSSL_DEPRECATEDIN_3_0 DSA *d2i_DSAPrivateKey_bio(BIO
 *bp, DSA **dsa);
OSSL_DEPRECATEDIN_3_0 int i2d_DSAPrivateKey_bio(BIO *bp, const DSA *dsa);
#   endif
#  endif

#  ifndef OPENSSL_NO_DEPRECATED_3_0
#   ifndef OPENSSL_NO_EC
OSSL_DEPRECATEDIN_3_0 EC_KEY *d2i_EC_PUBKEY_bio(BIO *bp, EC_KEY **eckey);
OSSL_DEPRECATEDIN_3_0 int i2d_EC_PUBKEY_bio(BIO *bp, const EC_KEY *eckey);
OSSL_DEPRECATEDIN_3_0 EC_KEY *d2i_ECPrivateKey_bio(BIO *bp, EC_KEY **eckey);
OSSL_DEPRECATEDIN_3_0 int i2d_ECPrivateKey_bio(BIO *bp, const EC_KEY *eckey);
#   endif /* OPENSSL_NO_EC */
#  endif /* OPENSSL_NO_DEPRECATED_3_0 */

X509_SIG *d2i_PKCS8_bio(BIO *bp, X509_SIG **p8);
int i2d_PKCS8_bio(BIO *bp, const X509_SIG *p8);
X509_PUBKEY *d2i_X509_PUBKEY_bio(BIO *bp, X509_PUBKEY **xpk);
int i2d_X509_PUBKEY_bio(BIO *bp, const X509_PUBKEY *xpk);
PKCS8_PRIV_KEY_INFO *d2i_PKCS8_PRIV_KEY_INFO_bio(BIO *bp,
                                 PKCS8_PRIV_KEY_INFO **p8inf);
int i2d_PKCS8_PRIV_KEY_INFO_bio(BIO *bp, const PKCS8_PRIV_KEY_INFO *p8inf);
int
 i2d_PKCS8PrivateKeyInfo_bio(BIO *bp, const EVP_PKEY *key);
int i2d_PrivateKey_bio(BIO *bp, const EVP_PKEY *pkey);
EVP_PKEY *d2i_PrivateKey_ex_bio(BIO *bp, EVP_PKEY **a, OSSL_LIB_CTX *libctx,
                        const char *propq);
EVP_PKEY *d2i_PrivateKey_bio(BIO *bp, EVP_PKEY **a);
int i2d_PUBKEY_bio(BIO *bp, const EVP_PKEY *pkey);
EVP_PKEY *d2i_PUBKEY_bio(BIO *bp, EVP_PKEY **a);

DECLARE_ASN1_DUP_FUNCTION(X509)
DECLARE_ASN1_DUP_FUNCTION(X509_ALGOR)
DECLARE_ASN1_DUP_FUNCTION(X509_ATTRIBUTE)
DECLARE_ASN1_DUP_FUNCTION(X509_CRL)
DECLARE_ASN1_DUP_FUNCTION(X509_EXTENSION)
DECLARE_ASN1_DUP_FUNCTION(X509_PUBKEY)
DECLARE_ASN1_DUP_FUNCTION(X509_REQ)
DECLARE_ASN1_DUP_FUNCTION(X509_REVOKED)
int X509_ALGOR_set0(X509_ALGOR *alg, ASN1_OBJECT *aobj, int ptype,
                    void *pval);
```

```
void X509_ALGOR_get0(const ASN1_OBJECT **paobj, int *pptype,
                     const void **ppval, const X509_ALGOR *algor);
void X509_ALGOR_set_md(X509_ALGOR *alg, const EVP_MD *md);
int
 X509_ALGOR_cmp(const X509_ALGOR *a, const X509_ALGOR *b);
int X509_ALGOR_copy(X509_ALGOR *dest, const X509_ALGOR *src);

DECLARE_ASN1_DUP_FUNCTION(X509_NAME)
DECLARE_ASN1_DUP_FUNCTION(X509_NAME_ENTRY)

int X509_cmp_time(const ASN1_TIME *s, time_t *t);
int X509_cmp_current_time(const ASN1_TIME *s);
int X509_cmp_timeframe(const X509_VERIFY_PARAM *vpm,
                       const ASN1_TIME *start, const ASN1_TIME *end);
ASN1_TIME *X509_time_adj(ASN1_TIME *s, long adj, time_t *t);
ASN1_TIME *X509_time_adj_ex(ASN1_TIME *s,
                            int offset_day, long offset_sec, time_t *t);
ASN1_TIME *X509_gmtime_adj(ASN1_TIME *s, long adj);

const char *X509_get_default_cert_area(void);
const char *X509_get_default_cert_dir(void);
const char *X509_get_default_cert_file(void);
const char *X509_get_default_cert_dir_env(void);
const char *X509_get_default_cert_file_env(void);
const char *X509_get_default_private_dir(void);

X509_REQ *X509_to_X509_REQ(X509 *x, EVP_PKEY *pkey, const EVP_MD
 *md);
X509 *X509_REQ_to_X509(X509_REQ *r, int days, EVP_PKEY *pkey);

DECLARE_ASN1_FUNCTIONS(X509_ALGOR)
DECLARE_ASN1_ENCODE_FUNCTIONS(X509_ALGORS, X509_ALGORS, X509_ALGORS)
DECLARE_ASN1_FUNCTIONS(X509_VAL)

DECLARE_ASN1_FUNCTIONS(X509_PUBKEY)

X509_PUBKEY *X509_PUBKEY_new_ex(OSSL_LIB_CTX *libctx, const char *propq);
int X509_PUBKEY_set(X509_PUBKEY **x, EVP_PKEY *pkey);
EVP_PKEY *X509_PUBKEY_get0(const X509_PUBKEY *key);
EVP_PKEY *X509_PUBKEY_get(const X509_PUBKEY *key);
int X509_get_pubkey_parameters(EVP_PKEY *pkey, STACK_OF(X509) *chain);
long X509_get_pathlen(X509 *x);
DECLARE_ASN1_ENCODE_FUNCTIONS_only(EVP_PKEY, PUBKEY)
EVP_PKEY *d2i_PUBKEY_ex(EVP_PKEY **a, const unsigned char **pp, long length,
                        OSSL_LIB_CTX *libctx, const char *propq);
# ifndef OPENSSL_NO_DEPRECATED_3_0
DECLARE_ASN1_ENCODE_FUNCTIONS_only_attr(OSSL_DEPRECATEDIN_3_0,RSA, RSA_PUBKEY)
# endif
```

```
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  ifndef OPENSSL_NO_DSA
DECLARE_ASN1_ENCODE_FUNCTIONS_only_attr(OSSL_DEPRECATEDIN_3_0,DSA,
 DSA_PUBKEY)
#  endif
# endif
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  ifndef OPENSSL_NO_EC
DECLARE_ASN1_ENCODE_FUNCTIONS_only_attr(OSSL_DEPRECATEDIN_3_0, EC_KEY, EC_PUBKEY)
#  endif
# endif

DECLARE_ASN1_FUNCTIONS(X509_SIG)
void X509_SIG_get0(const X509_SIG *sig, const X509_ALGOR **palg,
                   const ASN1_OCTET_STRING **pdigest);
void X509_SIG_getm(X509_SIG *sig, X509_ALGOR **palg,
                   ASN1_OCTET_STRING **pdigest);

DECLARE_ASN1_FUNCTIONS(X509_REQ_INFO)
DECLARE_ASN1_FUNCTIONS(X509_REQ)
X509_REQ *X509_REQ_new_ex(OSSL_LIB_CTX *libctx, const char *propq);

DECLARE_ASN1_FUNCTIONS(X509_ATTRIBUTE)
X509_ATTRIBUTE *X509_ATTRIBUTE_create(int nid, int atrtype, void *value);

DECLARE_ASN1_FUNCTIONS(X509_EXTENSION)
DECLARE_ASN1_ENCODE_FUNCTIONS(X509_EXTENSIONS, X509_EXTENSIONS, X509_EXTENSIONS)

DECLARE_ASN1_FUNCTIONS(X509_NAME_ENTRY)

DECLARE_ASN1_FUNCTIONS(X509_NAME)

int X509_NAME_set(X509_NAME **xn, const X509_NAME *name);

DECLARE_ASN1_FUNCTIONS(X509_CINF)
DECLARE_ASN1_FUNCTIONS(X509)
X509
 *X509_new_ex(OSSL_LIB_CTX *libctx, const char *propq);
DECLARE_ASN1_FUNCTIONS(X509_CERT_AUX)

#define X509_get_ex_new_index(l, p, newf, dupf, freef) \
  CRYPTO_get_ex_new_index(CRYPTO_EX_INDEX_X509, l, p, newf, dupf, freef)
int X509_set_ex_data(X509 *r, int idx, void *arg);
void *X509_get_ex_data(const X509 *r, int idx);
DECLARE_ASN1_ENCODE_FUNCTIONS_only(X509,X509_AUX)

int i2d_re_X509_tbs(X509 *x, unsigned char **pp);
```

```
int X509_SIG_INFO_get(const X509_SIG_INFO *siginf, int *mdnid, int *pknid,
                      int *secbits, uint32_t *flags);
void X509_SIG_INFO_set(X509_SIG_INFO *siginf, int mdnid, int pknid,
                       int secbits, uint32_t flags);

int X509_get_signature_info(X509 *x, int *mdnid, int *pknid, int *secbits,
                            uint32_t *flags);

void X509_get0_signature(const ASN1_BIT_STRING **psig,
                         const X509_ALGOR **palg, const X509 *x);
int X509_get_signature_nid(const
 X509 *x);

void X509_set0_distinguishing_id(X509 *x, ASN1_OCTET_STRING *d_id);
ASN1_OCTET_STRING *X509_get0_distinguishing_id(X509 *x);
void X509_REQ_set0_distinguishing_id(X509_REQ *x, ASN1_OCTET_STRING *d_id);
ASN1_OCTET_STRING *X509_REQ_get0_distinguishing_id(X509_REQ *x);

int X509_alias_set1(X509 *x, const unsigned char *name, int len);
int X509_keyid_set1(X509 *x, const unsigned char *id, int len);
unsigned char *X509_alias_get0(X509 *x, int *len);
unsigned char *X509_keyid_get0(X509 *x, int *len);

DECLARE_ASN1_FUNCTIONS(X509_REVOKED)
DECLARE_ASN1_FUNCTIONS(X509_CRL_INFO)
DECLARE_ASN1_FUNCTIONS(X509_CRL)
X509_CRL *X509_CRL_new_ex(OSSL_LIB_CTX *libctx, const char *propq);

int X509_CRL_add0_revoked(X509_CRL *crl, X509_REVOKED *rev);
int X509_CRL_get0_by_serial(X509_CRL *crl,
                            X509_REVOKED **ret, const ASN1_INTEGER *serial);
int X509_CRL_get0_by_cert(X509_CRL *crl, X509_REVOKED **ret, X509 *x);

X509_PKEY *X509_PKEY_new(void);
void X509_PKEY_free(X509_PKEY
 *a);

DECLARE_ASN1_FUNCTIONS(NETSCAPE_SPKI)
DECLARE_ASN1_FUNCTIONS(NETSCAPE_SPKAC)
DECLARE_ASN1_FUNCTIONS(NETSCAPE_CERT_SEQUENCE)

X509_INFO *X509_INFO_new(void);
void X509_INFO_free(X509_INFO *a);
char *X509_NAME_oneline(const X509_NAME *a, char *buf, int size);

#ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0
int ASN1_verify(i2d_of_void *i2d, X509_ALGOR *algor1,
```

```
            ASN1_BIT_STRING *signature, char *data, EVP_PKEY *pkey);
OSSL_DEPRECATEDIN_3_0
int ASN1_digest(i2d_of_void *i2d, const EVP_MD *type, char *data,
            unsigned char *md, unsigned int *len);
OSSL_DEPRECATEDIN_3_0
int ASN1_sign(i2d_of_void *i2d, X509_ALGOR *algor1, X509_ALGOR *algor2,
           ASN1_BIT_STRING *signature, char *data, EVP_PKEY *pkey,
           const EVP_MD *type);
#endif
int ASN1_item_digest(const ASN1_ITEM *it, const EVP_MD *type, void *data,
                unsigned char *md, unsigned int *len);
int ASN1_item_verify(const ASN1_ITEM *it, const X509_ALGOR *alg,
                 const ASN1_BIT_STRING *signature, const void *data,
                EVP_PKEY *pkey);
int ASN1_item_verify_ctx(const ASN1_ITEM *it, const X509_ALGOR *alg,
                   const ASN1_BIT_STRING *signature, const void *data,
                   EVP_MD_CTX *ctx);
int ASN1_item_sign(const ASN1_ITEM *it, X509_ALGOR *algor1, X509_ALGOR *algor2,
               ASN1_BIT_STRING *signature, const void *data,
               EVP_PKEY *pkey, const EVP_MD *md);
int ASN1_item_sign_ctx(const ASN1_ITEM *it, X509_ALGOR *algor1,
                   X509_ALGOR *algor2, ASN1_BIT_STRING *signature,
                   const void *data, EVP_MD_CTX *ctx);

#define X509_VERSION_1 0
#define X509_VERSION_2 1
#define X509_VERSION_3 2

long X509_get_version(const X509 *x);
int X509_set_version(X509 *x, long version);
int X509_set_serialNumber(X509 *x, ASN1_INTEGER *serial);
ASN1_INTEGER *X509_get_serialNumber(X509 *x);
const ASN1_INTEGER *X509_get0_serialNumber(const
 X509 *x);
int X509_set_issuer_name(X509 *x, const X509_NAME *name);
X509_NAME *X509_get_issuer_name(const X509 *a);
int X509_set_subject_name(X509 *x, const X509_NAME *name);
X509_NAME *X509_get_subject_name(const X509 *a);
const ASN1_TIME * X509_get0_notBefore(const X509 *x);
ASN1_TIME *X509_getm_notBefore(const X509 *x);
int X509_set1_notBefore(X509 *x, const ASN1_TIME *tm);
const ASN1_TIME *X509_get0_notAfter(const X509 *x);
ASN1_TIME *X509_getm_notAfter(const X509 *x);
int X509_set1_notAfter(X509 *x, const ASN1_TIME *tm);
int X509_set_pubkey(X509 *x, EVP_PKEY *pkey);
int X509_up_ref(X509 *x);
int X509_get_signature_type(const X509 *x);
```

```
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define X509_get_notBefore X509_getm_notBefore
#  define X509_get_notAfter X509_getm_notAfter
#  define X509_set_notBefore X509_set1_notBefore
#  define X509_set_notAfter X509_set1_notAfter
#endif


/*
* This one is only used so that a binary form can output, as in
* i2d_X509_PUBKEY(X509_get_X509_PUBKEY(x),
 &buf)
*/
X509_PUBKEY *X509_get_X509_PUBKEY(const X509 *x);
const STACK_OF(X509_EXTENSION) *X509_get0_extensions(const X509 *x);
void X509_get0_uids(const X509 *x, const ASN1_BIT_STRING **piuid,
                    const ASN1_BIT_STRING **psuid);
const X509_ALGOR *X509_get0_tbs_sigalg(const X509 *x);

EVP_PKEY *X509_get0_pubkey(const X509 *x);
EVP_PKEY *X509_get_pubkey(X509 *x);
ASN1_BIT_STRING *X509_get0_pubkey_bitstr(const X509 *x);

#define X509_REQ_VERSION_1 0

long X509_REQ_get_version(const X509_REQ *req);
int X509_REQ_set_version(X509_REQ *x, long version);
X509_NAME *X509_REQ_get_subject_name(const X509_REQ *req);
int X509_REQ_set_subject_name(X509_REQ *req, const X509_NAME *name);
void X509_REQ_get0_signature(const X509_REQ *req, const ASN1_BIT_STRING **psig,
                             const X509_ALGOR **palg);
void X509_REQ_set0_signature(X509_REQ *req, ASN1_BIT_STRING *psig);
int X509_REQ_set1_signature_algo(X509_REQ *req, X509_ALGOR *palg);
int X509_REQ_get_signature_nid(const
 X509_REQ *req);
int i2d_re_X509_REQ_tbs(X509_REQ *req, unsigned char **pp);
int X509_REQ_set_pubkey(X509_REQ *x, EVP_PKEY *pkey);
EVP_PKEY *X509_REQ_get_pubkey(X509_REQ *req);
EVP_PKEY *X509_REQ_get0_pubkey(X509_REQ *req);
X509_PUBKEY *X509_REQ_get_X509_PUBKEY(X509_REQ *req);
int X509_REQ_extension_nid(int nid);
int *X509_REQ_get_extension_nids(void);
void X509_REQ_set_extension_nids(int *nids);
STACK_OF(X509_EXTENSION) *X509_REQ_get_extensions(X509_REQ *req);
int X509_REQ_add_extensions_nid(X509_REQ *req,
                                const STACK_OF(X509_EXTENSION) *exts, int nid);
int X509_REQ_add_extensions(X509_REQ *req, const STACK_OF(X509_EXTENSION) *ext);
int X509_REQ_get_attr_count(const X509_REQ *req);
```

```
int X509_REQ_get_attr_by_NID(const X509_REQ *req, int nid, int lastpos);
int X509_REQ_get_attr_by_OBJ(const X509_REQ *req, const ASN1_OBJECT *obj,
                             int lastpos);
X509_ATTRIBUTE *X509_REQ_get_attr(const X509_REQ *req, int loc);
X509_ATTRIBUTE
 *X509_REQ_delete_attr(X509_REQ *req, int loc);
int X509_REQ_add1_attr(X509_REQ *req, X509_ATTRIBUTE *attr);
int X509_REQ_add1_attr_by_OBJ(X509_REQ *req,
                              const ASN1_OBJECT *obj, int type,
                              const unsigned char *bytes, int len);
int X509_REQ_add1_attr_by_NID(X509_REQ *req,
                              int nid, int type,
                              const unsigned char *bytes, int len);
int X509_REQ_add1_attr_by_txt(X509_REQ *req,
                              const char *attrname, int type,
                              const unsigned char *bytes, int len);

#define X509_CRL_VERSION_1 0
#define X509_CRL_VERSION_2 1

int X509_CRL_set_version(X509_CRL *x, long version);
int X509_CRL_set_issuer_name(X509_CRL *x, const X509_NAME *name);
int X509_CRL_set1_lastUpdate(X509_CRL *x, const ASN1_TIME *tm);
int X509_CRL_set1_nextUpdate(X509_CRL *x, const ASN1_TIME *tm);
int X509_CRL_sort(X509_CRL *crl);
int X509_CRL_up_ref(X509_CRL *crl);

#
 ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define X509_CRL_set_lastUpdate X509_CRL_set1_lastUpdate
#  define X509_CRL_set_nextUpdate X509_CRL_set1_nextUpdate
#endif

long X509_CRL_get_version(const X509_CRL *crl);
const ASN1_TIME *X509_CRL_get0_lastUpdate(const X509_CRL *crl);
const ASN1_TIME *X509_CRL_get0_nextUpdate(const X509_CRL *crl);
#ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 ASN1_TIME *X509_CRL_get_lastUpdate(X509_CRL *crl);
OSSL_DEPRECATEDIN_1_1_0 ASN1_TIME *X509_CRL_get_nextUpdate(X509_CRL *crl);
#endif
X509_NAME *X509_CRL_get_issuer(const X509_CRL *crl);
const STACK_OF(X509_EXTENSION) *X509_CRL_get0_extensions(const X509_CRL *crl);
STACK_OF(X509_REVOKED) *X509_CRL_get_REVOKED(X509_CRL *crl);
void X509_CRL_get0_signature(const X509_CRL *crl, const ASN1_BIT_STRING **psig,
                             const X509_ALGOR **palg);
int X509_CRL_get_signature_nid(const X509_CRL *crl);
int i2d_re_X509_CRL_tbs(X509_CRL *req, unsigned char **pp);
```

```
const ASN1_INTEGER *X509_REVOKED_get0_serialNumber(const
 X509_REVOKED *x);
int X509_REVOKED_set_serialNumber(X509_REVOKED *x, ASN1_INTEGER *serial);
const ASN1_TIME *X509_REVOKED_get0_revocationDate(const X509_REVOKED *x);
int X509_REVOKED_set_revocationDate(X509_REVOKED *r, ASN1_TIME *tm);
const STACK_OF(X509_EXTENSION) *
X509_REVOKED_get0_extensions(const X509_REVOKED *r);

X509_CRL *X509_CRL_diff(X509_CRL *base, X509_CRL *newer,
                        EVP_PKEY *skey, const EVP_MD *md, unsigned int flags);

int X509_REQ_check_private_key(X509_REQ *x509, EVP_PKEY *pkey);

int X509_check_private_key(const X509 *x509, const EVP_PKEY *pkey);
int X509_chain_check_suiteb(int *perror_depth,
                            X509 *x, STACK_OF(X509) *chain,
                            unsigned long flags);
int X509_CRL_check_suiteb(X509_CRL *crl, EVP_PKEY *pk, unsigned long flags);
STACK_OF(X509) *X509_chain_up_ref(STACK_OF(X509) *chain);

int X509_issuer_and_serial_cmp(const X509 *a, const X509 *b);
unsigned long X509_issuer_and_serial_hash(X509
 *a);

int X509_issuer_name_cmp(const X509 *a, const X509 *b);
unsigned long X509_issuer_name_hash(X509 *a);

int X509_subject_name_cmp(const X509 *a, const X509 *b);
unsigned long X509_subject_name_hash(X509 *x);

# ifndef OPENSSL_NO_MD5
unsigned long X509_issuer_name_hash_old(X509 *a);
unsigned long X509_subject_name_hash_old(X509 *x);
# endif

# define X509_ADD_FLAG_DEFAULT  0
# define X509_ADD_FLAG_UP_REF   0x1
# define X509_ADD_FLAG_PREPEND  0x2
# define X509_ADD_FLAG_NO_DUP   0x4
# define X509_ADD_FLAG_NO_SS    0x8
int X509_add_cert(STACK_OF(X509) *sk, X509 *cert, int flags);
int X509_add_certs(STACK_OF(X509) *sk, STACK_OF(X509) *certs, int flags);

int X509_cmp(const X509 *a, const X509 *b);
int X509_NAME_cmp(const X509_NAME *a, const X509_NAME *b);
#ifndef OPENSSL_NO_DEPRECATED_3_0
# define X509_NAME_hash(x) X509_NAME_hash_ex(x, NULL, NULL, NULL)
OSSL_DEPRECATEDIN_3_0 int X509_certificate_type(const X509 *x,
```

```
        const EVP_PKEY *pubkey);
#endif
unsigned long X509_NAME_hash_ex(const X509_NAME *x, OSSL_LIB_CTX *libctx,
                                const char *propq, int *ok);
unsigned long X509_NAME_hash_old(const X509_NAME *x);

int X509_CRL_cmp(const X509_CRL *a, const X509_CRL *b);
int X509_CRL_match(const X509_CRL *a, const X509_CRL *b);
int X509_aux_print(BIO *out, X509 *x, int indent);
# ifndef OPENSSL_NO_STDIO
int X509_print_ex_fp(FILE *bp, X509 *x, unsigned long nmflag,
                     unsigned long cflag);
int X509_print_fp(FILE *bp, X509 *x);
int X509_CRL_print_fp(FILE *bp, X509_CRL *x);
int X509_REQ_print_fp(FILE *bp, X509_REQ *req);
int X509_NAME_print_ex_fp(FILE *fp, const X509_NAME *nm, int indent,
                          unsigned long flags);
# endif

int X509_NAME_print(BIO *bp, const X509_NAME *name, int obase);
int X509_NAME_print_ex(BIO *out, const X509_NAME *nm, int indent,
                       unsigned long flags);
int X509_print_ex(BIO *bp, X509 *x, unsigned
 long nmflag,
                  unsigned long cflag);
int X509_print(BIO *bp, X509 *x);
int X509_ocspid_print(BIO *bp, X509 *x);
int X509_CRL_print_ex(BIO *out, X509_CRL *x, unsigned long nmflag);
int X509_CRL_print(BIO *bp, X509_CRL *x);
int X509_REQ_print_ex(BIO *bp, X509_REQ *x, unsigned long nmflag,
                      unsigned long cflag);
int X509_REQ_print(BIO *bp, X509_REQ *req);

int X509_NAME_entry_count(const X509_NAME *name);
int X509_NAME_get_text_by_NID(const X509_NAME *name, int nid,
                              char *buf, int len);
int X509_NAME_get_text_by_OBJ(const X509_NAME *name, const ASN1_OBJECT *obj,
                              char *buf, int len);

/*
* NOTE: you should be passing -1, not 0 as lastpos. The functions that use
* lastpos, search after that position on.
*/
int X509_NAME_get_index_by_NID(const X509_NAME *name, int nid, int lastpos);
int X509_NAME_get_index_by_OBJ(const X509_NAME *name, const ASN1_OBJECT *obj,
```

```
 int lastpos);
X509_NAME_ENTRY *X509_NAME_get_entry(const X509_NAME *name, int loc);
X509_NAME_ENTRY *X509_NAME_delete_entry(X509_NAME *name, int loc);
int X509_NAME_add_entry(X509_NAME *name, const X509_NAME_ENTRY *ne,
                int loc, int set);
int X509_NAME_add_entry_by_OBJ(X509_NAME *name, const ASN1_OBJECT *obj, int type,
                        const unsigned char *bytes, int len, int loc,
                        int set);
int X509_NAME_add_entry_by_NID(X509_NAME *name, int nid, int type,
                        const unsigned char *bytes, int len, int loc,
                        int set);
X509_NAME_ENTRY *X509_NAME_ENTRY_create_by_txt(X509_NAME_ENTRY **ne,
                                const char *field, int type,
                                const unsigned char *bytes,
                                int len);
X509_NAME_ENTRY *X509_NAME_ENTRY_create_by_NID(X509_NAME_ENTRY **ne, int nid,
                                 int type,
                                const unsigned char *bytes,
                                int len);
int X509_NAME_add_entry_by_txt(X509_NAME *name, const char *field, int type,
                        const unsigned char *bytes, int len, int loc,
                        int set);
X509_NAME_ENTRY *X509_NAME_ENTRY_create_by_OBJ(X509_NAME_ENTRY **ne,
                                const ASN1_OBJECT *obj, int type,
                                const unsigned char *bytes,
                                int len);
int X509_NAME_ENTRY_set_object(X509_NAME_ENTRY *ne, const ASN1_OBJECT *obj);
int X509_NAME_ENTRY_set_data(X509_NAME_ENTRY *ne, int type,
                     const unsigned char *bytes, int len);
ASN1_OBJECT *X509_NAME_ENTRY_get_object(const X509_NAME_ENTRY *ne);
ASN1_STRING * X509_NAME_ENTRY_get_data(const X509_NAME_ENTRY
 *ne);
int X509_NAME_ENTRY_set(const X509_NAME_ENTRY *ne);

int X509_NAME_get0_der(const X509_NAME *nm, const unsigned char **pder,
                size_t *pderlen);

int X509v3_get_ext_count(const STACK_OF(X509_EXTENSION) *x);
int X509v3_get_ext_by_NID(const STACK_OF(X509_EXTENSION) *x,
                  int nid, int lastpos);
int X509v3_get_ext_by_OBJ(const STACK_OF(X509_EXTENSION) *x,
                  const ASN1_OBJECT *obj, int lastpos);
int X509v3_get_ext_by_critical(const STACK_OF(X509_EXTENSION) *x,
                        int crit, int lastpos);
X509_EXTENSION *X509v3_get_ext(const STACK_OF(X509_EXTENSION) *x, int loc);
X509_EXTENSION *X509v3_delete_ext(STACK_OF(X509_EXTENSION) *x, int loc);
STACK_OF(X509_EXTENSION) *X509v3_add_ext(STACK_OF(X509_EXTENSION) **x,
                             X509_EXTENSION *ex, int loc);
```

```
int X509_get_ext_count(const X509 *x);
int X509_get_ext_by_NID(const X509 *x, int nid, int lastpos);
int X509_get_ext_by_OBJ(const
 X509 *x, const ASN1_OBJECT *obj, int lastpos);
int X509_get_ext_by_critical(const X509 *x, int crit, int lastpos);
X509_EXTENSION *X509_get_ext(const X509 *x, int loc);
X509_EXTENSION *X509_delete_ext(X509 *x, int loc);
int X509_add_ext(X509 *x, X509_EXTENSION *ex, int loc);
void *X509_get_ext_d2i(const X509 *x, int nid, int *crit, int *idx);
int X509_add1_ext_i2d(X509 *x, int nid, void *value, int crit,
                 unsigned long flags);

int X509_CRL_get_ext_count(const X509_CRL *x);
int X509_CRL_get_ext_by_NID(const X509_CRL *x, int nid, int lastpos);
int X509_CRL_get_ext_by_OBJ(const X509_CRL *x, const ASN1_OBJECT *obj,
                    int lastpos);
int X509_CRL_get_ext_by_critical(const X509_CRL *x, int crit, int lastpos);
X509_EXTENSION *X509_CRL_get_ext(const X509_CRL *x, int loc);
X509_EXTENSION *X509_CRL_delete_ext(X509_CRL *x, int loc);
int X509_CRL_add_ext(X509_CRL *x, X509_EXTENSION *ex, int loc);
void *X509_CRL_get_ext_d2i(const X509_CRL
 *x, int nid, int *crit, int *idx);
int X509_CRL_add1_ext_i2d(X509_CRL *x, int nid, void *value, int crit,
                  unsigned long flags);

int X509_REVOKED_get_ext_count(const X509_REVOKED *x);
int X509_REVOKED_get_ext_by_NID(const X509_REVOKED *x, int nid, int lastpos);
int X509_REVOKED_get_ext_by_OBJ(const X509_REVOKED *x, const ASN1_OBJECT *obj,
                     int lastpos);
int X509_REVOKED_get_ext_by_critical(const X509_REVOKED *x, int crit,
                         int lastpos);
X509_EXTENSION *X509_REVOKED_get_ext(const X509_REVOKED *x, int loc);
X509_EXTENSION *X509_REVOKED_delete_ext(X509_REVOKED *x, int loc);
int X509_REVOKED_add_ext(X509_REVOKED *x, X509_EXTENSION *ex, int loc);
void *X509_REVOKED_get_ext_d2i(const X509_REVOKED *x, int nid, int *crit,
                     int *idx);
int X509_REVOKED_add1_ext_i2d(X509_REVOKED *x, int nid, void *value, int crit,
                     unsigned long flags);

X509_EXTENSION
 *X509_EXTENSION_create_by_NID(X509_EXTENSION **ex,
                               int nid, int crit,
                               ASN1_OCTET_STRING *data);
X509_EXTENSION *X509_EXTENSION_create_by_OBJ(X509_EXTENSION **ex,
                               const ASN1_OBJECT *obj, int crit,
                               ASN1_OCTET_STRING *data);
int X509_EXTENSION_set_object(X509_EXTENSION *ex, const ASN1_OBJECT *obj);
```

```
int X509_EXTENSION_set_critical(X509_EXTENSION *ex, int crit);
int X509_EXTENSION_set_data(X509_EXTENSION *ex, ASN1_OCTET_STRING *data);
ASN1_OBJECT *X509_EXTENSION_get_object(X509_EXTENSION *ex);
ASN1_OCTET_STRING *X509_EXTENSION_get_data(X509_EXTENSION *ne);
int X509_EXTENSION_get_critical(const X509_EXTENSION *ex);

int X509at_get_attr_count(const STACK_OF(X509_ATTRIBUTE) *x);
int X509at_get_attr_by_NID(const STACK_OF(X509_ATTRIBUTE) *x, int nid,
                int lastpos);
int X509at_get_attr_by_OBJ(const
 STACK_OF(X509_ATTRIBUTE) *sk,
                const ASN1_OBJECT *obj, int lastpos);
X509_ATTRIBUTE *X509at_get_attr(const STACK_OF(X509_ATTRIBUTE) *x, int loc);
X509_ATTRIBUTE *X509at_delete_attr(STACK_OF(X509_ATTRIBUTE) *x, int loc);
STACK_OF(X509_ATTRIBUTE) *X509at_add1_attr(STACK_OF(X509_ATTRIBUTE) **x,
                        X509_ATTRIBUTE *attr);
STACK_OF(X509_ATTRIBUTE) *X509at_add1_attr_by_OBJ(STACK_OF(X509_ATTRIBUTE)
                        **x, const ASN1_OBJECT *obj,
                        int type,
                        const unsigned char *bytes,
                        int len);
STACK_OF(X509_ATTRIBUTE) *X509at_add1_attr_by_NID(STACK_OF(X509_ATTRIBUTE)
                        **x, int nid, int type,
                        const unsigned char *bytes,

                int len);
STACK_OF(X509_ATTRIBUTE) *X509at_add1_attr_by_txt(STACK_OF(X509_ATTRIBUTE)
                        **x, const char *attrname,
                        int type,
                        const unsigned char *bytes,
                        int len);
void *X509at_get0_data_by_OBJ(const STACK_OF(X509_ATTRIBUTE) *x,
                const ASN1_OBJECT *obj, int lastpos, int type);
X509_ATTRIBUTE *X509_ATTRIBUTE_create_by_NID(X509_ATTRIBUTE **attr, int nid,
                        int atrtype, const void *data,
                        int len);
X509_ATTRIBUTE *X509_ATTRIBUTE_create_by_OBJ(X509_ATTRIBUTE **attr,
                        const ASN1_OBJECT *obj,
                        int atrtype, const void *data,
                        int len);
X509_ATTRIBUTE
 *X509_ATTRIBUTE_create_by_txt(X509_ATTRIBUTE **attr,
                        const char *atrname, int type,
                        const unsigned char *bytes,
                        int len);
int X509_ATTRIBUTE_set1_object(X509_ATTRIBUTE *attr, const ASN1_OBJECT *obj);
int X509_ATTRIBUTE_set1_data(X509_ATTRIBUTE *attr, int attrtype,
                const void *data, int len);
```

```
void *X509_ATTRIBUTE_get0_data(X509_ATTRIBUTE *attr, int idx, int atrtype,
                               void *data);
int X509_ATTRIBUTE_count(const X509_ATTRIBUTE *attr);
ASN1_OBJECT *X509_ATTRIBUTE_get0_object(X509_ATTRIBUTE *attr);
ASN1_TYPE *X509_ATTRIBUTE_get0_type(X509_ATTRIBUTE *attr, int idx);

int EVP_PKEY_get_attr_count(const EVP_PKEY *key);
int EVP_PKEY_get_attr_by_NID(const EVP_PKEY *key, int nid, int lastpos);
int EVP_PKEY_get_attr_by_OBJ(const EVP_PKEY *key, const ASN1_OBJECT *obj,

      int lastpos);
X509_ATTRIBUTE *EVP_PKEY_get_attr(const EVP_PKEY *key, int loc);
X509_ATTRIBUTE *EVP_PKEY_delete_attr(EVP_PKEY *key, int loc);
int EVP_PKEY_add1_attr(EVP_PKEY *key, X509_ATTRIBUTE *attr);
int EVP_PKEY_add1_attr_by_OBJ(EVP_PKEY *key,
                              const ASN1_OBJECT *obj, int type,
                              const unsigned char *bytes, int len);
int EVP_PKEY_add1_attr_by_NID(EVP_PKEY *key,
                              int nid, int type,
                              const unsigned char *bytes, int len);
int EVP_PKEY_add1_attr_by_txt(EVP_PKEY *key,
                              const char *attrname, int type,
                              const unsigned char *bytes, int len);

/* lookup a cert from a X509 STACK */
X509 *X509_find_by_issuer_and_serial(STACK_OF(X509) *sk, const X509_NAME *name,
                                     const ASN1_INTEGER *serial);
X509 *X509_find_by_subject(STACK_OF(X509) *sk, const X509_NAME *name);

DECLARE_ASN1_FUNCTIONS(PBEPARAM)
DECLARE_ASN1_FUNCTIONS(PBE2PARAM)
DECLARE_ASN1_FUNCTIONS(PBKDF2PARAM)
#ifndef
 OPENSSL_NO_SCRYPT
DECLARE_ASN1_FUNCTIONS(SCRYPT_PARAMS)
#endif

int PKCS5_pbe_set0_algor(X509_ALGOR *algor, int alg, int iter,
                         const unsigned char *salt, int saltlen);
int PKCS5_pbe_set0_algor_ex(X509_ALGOR *algor, int alg, int iter,
                            const unsigned char *salt, int saltlen,
                            OSSL_LIB_CTX *libctx);

X509_ALGOR *PKCS5_pbe_set(int alg, int iter,
                          const unsigned char *salt, int saltlen);
X509_ALGOR *PKCS5_pbe_set_ex(int alg, int iter,
                             const unsigned char *salt, int saltlen,
                             OSSL_LIB_CTX *libctx);
```

```
X509_ALGOR *PKCS5_pbe2_set(const EVP_CIPHER *cipher, int iter,
                           unsigned char *salt, int saltlen);
X509_ALGOR *PKCS5_pbe2_set_iv(const EVP_CIPHER *cipher, int iter,
                              unsigned char *salt, int saltlen,
                              unsigned char *aiv, int prf_nid);
X509_ALGOR *PKCS5_pbe2_set_iv_ex(const EVP_CIPHER *cipher, int iter,
                                 unsigned char *salt, int saltlen,
                                 unsigned char *aiv, int prf_nid,
                                 OSSL_LIB_CTX *libctx);

#ifndef OPENSSL_NO_SCRYPT
X509_ALGOR *PKCS5_pbe2_set_scrypt(const EVP_CIPHER *cipher,
                                  const unsigned char *salt, int saltlen,
                                  unsigned char *aiv, uint64_t N, uint64_t r,
                                  uint64_t p);
#endif

X509_ALGOR *PKCS5_pbkdf2_set(int iter, unsigned char *salt, int saltlen,
                             int prf_nid, int keylen);
X509_ALGOR *PKCS5_pbkdf2_set_ex(int iter, unsigned char *salt, int saltlen,
                                int prf_nid, int keylen,
                                OSSL_LIB_CTX *libctx);

/* PKCS#8 utilities */

DECLARE_ASN1_FUNCTIONS(PKCS8_PRIV_KEY_INFO)

EVP_PKEY
 *EVP_PKCS82PKEY(const PKCS8_PRIV_KEY_INFO *p8);
EVP_PKEY *EVP_PKCS82PKEY_ex(const PKCS8_PRIV_KEY_INFO *p8, OSSL_LIB_CTX *libctx,
                            const char *propq);
PKCS8_PRIV_KEY_INFO *EVP_PKEY2PKCS8(const EVP_PKEY *pkey);

int PKCS8_pkey_set0(PKCS8_PRIV_KEY_INFO *priv, ASN1_OBJECT *aobj,
                    int version, int ptype, void *pval,
                    unsigned char *penc, int penclen);
int PKCS8_pkey_get0(const ASN1_OBJECT **ppkalg,
                    const unsigned char **pk, int *ppklen,
                    const X509_ALGOR **pa, const PKCS8_PRIV_KEY_INFO *p8);

const STACK_OF(X509_ATTRIBUTE) *
PKCS8_pkey_get0_attrs(const PKCS8_PRIV_KEY_INFO *p8);
int PKCS8_pkey_add1_attr(PKCS8_PRIV_KEY_INFO *p8, X509_ATTRIBUTE *attr);
int PKCS8_pkey_add1_attr_by_NID(PKCS8_PRIV_KEY_INFO *p8, int nid, int type,
                                const unsigned char *bytes, int len);
int PKCS8_pkey_add1_attr_by_OBJ(PKCS8_PRIV_KEY_INFO *p8, const ASN1_OBJECT *obj,
```

int type, const unsigned char *bytes, int len);

int X509_PUBKEY_set0_param(X509_PUBKEY *pub, ASN1_OBJECT *aobj,
int ptype, void *pval,
unsigned char *penc, int penclen);
int X509_PUBKEY_get0_param(ASN1_OBJECT **ppkalg,
const unsigned char **pk, int *ppklen,
X509_ALGOR **pa, const X509_PUBKEY *pub);
int X509_PUBKEY_eq(const X509_PUBKEY *a, const X509_PUBKEY *b);

ifdef __cplusplus
}
endif
#endif
BSD-2-Clause
Recognizing Contributors

The project looks to recognize and thank contributors for their contributions
as one of the ways we can help them continue to contribute to the project.

This document captures some of the processes we have in place to do that.

Some of the benefits we hope to achieve through these programs include:

* Ensuring people know that the project appreciates their work
* Encouraging people to repeat/grow their contributions
* Helping people demonstrate to their managers the value of the
contributions they are making, which in terms helps their manager support
their employer investing in the project (unfortunately this is
something that matters)
* Highlighting the new features in Node.js and showing that they are
being added by individuals like those mentioned. This should encourage
other people to get involved and make similar contributions.
* Highlighting those leading efforts/initiatives and they are being
done by individuals or teams like those mentioned.
This should
encourage other people to get involved and make similar contributions

Sponsorship link on nodejs/node README.md

Collaborators may add a single link beside their name on the nodejs/node
[`README.md`](../../README.md) file in the section titled `Collaborators`
named `Support me`. This link may be:

1. a direct link to one of the sponsorship platforms listed below,
2. a page that has text explaining how to support the collaborator
including zero or more links to the sponsorship platforms listed below.

The page should not have any outgoing links other than to the
sponsorship platforms. We expect and trust collaborators to ensure that
the text is professional and respectful.

The sponsorship platforms to which links can be made currently
includes (in alphabetical order):

* [GitHub Sponsors](https://github.com/sponsors)
* [Polar](https://polar.sh/)
* thanks.dev

Amplification of posts announcing talks by collaborators

When a collaborator
is speaking at a public event they may request amplification
by the Node.js social media accounts. They can request that a post highlighting
that they are speaking at the event be amplified by the Node.js accounts by
making a request in the #nodejs-social channel in the OpenJS Foundation slack.
We trust that collaborators will only request amplification when they believe
the event is relevant to the Node.js community and the content of the post is
in line with the norms of the project.

Bi-monthly contributor spotlight

The contributor spotlight program showcases individual(s) or teams who have
made signification contributions to the project. Anybody who is not
a member of the Technical Steering Committee (TSC) and has made a
notable contribution to the project can be nominated. They DO NOT need
to be a collaborator, team member etc.

The work of the team or individual(s) will be showcased on the
Node.js social channels and, if warranted, through a blog post created by the
OpenJS
marketing staff along with the team or individual(s) which will
be published on openjsf.org.

Nominations can be made through this web form:
[Contributor Spotlight nomination](https://forms.gle/dXBXZn8yu83HLJ57A)

Nominations will be reviewed/approved by the Technical Steering Committee (TSC)
on a regular basis as scheduled by the TSC chair. The TSC will also
recommend the order in which approved nominations are processed
by the OpenJS marketing staff.

Before any work proceeds on an approved nomination the individual(s)
or team will be contacted to confirm they want to participate. Social
content and or spotlight blog post will only be published after the
team or individual(s) have confirmed they are happy with the content.

Copyright (c) 1994-2006 Sun Microsystems Inc.
All Rights Reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

- Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.

- Redistribution in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.

- Neither the name of Sun Microsystems or the names of contributors may
be used to endorse or promote products derived from this software without
specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS
IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO,
THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR
PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
MIT License

Copyright (C) 2012-2022 by various contributors (see AUTHORS)

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER

LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (c) 2006 Apple Computer, Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.

3. Neither the name of the copyright holder(s) nor the names of any
contributors may be used to endorse or promote products derived
from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
OF THE POSSIBILITY OF SUCH DAMAGE.

```
{
 'variables': {
   'openssl_sources': [
     'openssl/crypto/aes/aes_ecb.c',
     'openssl/crypto/aes/aes_misc.c',
     'openssl/crypto/bn/bn_add.c',
     'openssl/crypto/bn/bn_blind.c',
     'openssl/crypto/bn/bn_const.c',
     'openssl/crypto/bn/bn_conv.c',
     'openssl/crypto/bn/bn_ctx.c',
     'openssl/crypto/bn/bn_dh.c',
     'openssl/crypto/bn/bn_div.c',
     'openssl/crypto/bn/bn_exp.c',
```

'openssl/crypto/bn/bn_exp2.c',
'openssl/crypto/bn/bn_gcd.c',
'openssl/crypto/bn/bn_gf2m.c',
'openssl/crypto/bn/bn_intern.c',
'openssl/crypto/bn/bn_kron.c',
'openssl/crypto/bn/bn_lib.c',
'openssl/crypto/bn/bn_mod.c',
'openssl/crypto/bn/bn_mont.c',
'openssl/crypto/bn/bn_mpi.c',
'openssl/crypto/bn/bn_mul.c',
'openssl/crypto/bn/bn_nist.c',
'openssl/crypto/bn/bn_prime.c',
'openssl/crypto/bn/bn_rand.c',
'openssl/crypto/bn/bn_recp.c',
'openssl/crypto/bn/bn_rsa_fips186_4.c',
'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_word.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/cmac/cmac.c',
'openssl/crypto/des/ecb3_enc.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',

'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_nistz256.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',

'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/initthread.c',
'openssl/crypto/o_str.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rsa/rsa_acvp_test_params.c',

'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/sha/keccak1600.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/stack/stack.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_fips.c',
'openssl/providers/fips/fipsprov.c',
'openssl/providers/fips/self_test.c',
'openssl/providers/fips/self_test_kats.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',

'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',
'openssl/ssl/s3_cbc.c',
'openssl/providers/common/der/der_dsa_key.c',
'openssl/providers/common/der/der_dsa_sig.c',
'openssl/providers/common/der/der_ec_key.c',
'openssl/providers/common/der/der_ec_sig.c',
'openssl/providers/common/der/der_ecx_key.c',

```
  'openssl/providers/common/der/der_rsa_key.c',
  'openssl/providers/common/provider_ctx.c',
  'openssl/providers/common/provider_err.c',
  'openssl/providers/implementations/ciphers/ciphercommon.c',
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
   'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/fips/fips_entry.c',

 ],
 'openssl_sources_BSD-x86': [
  './config/archs/BSD-x86/asm/crypto/aes/aes-586.S',
  './config/archs/BSD-x86/asm/crypto/aes/aesni-x86.S',
  './config/archs/BSD-x86/asm/crypto/aes/vpaes-x86.S',
  './config/archs/BSD-x86/asm/crypto/bf/bf-586.S',
  './config/archs/BSD-x86/asm/crypto/bn/bn-586.S',
  './config/archs/BSD-x86/asm/crypto/bn/co-586.S',
  './config/archs/BSD-x86/asm/crypto/bn/x86-gf2m.S',
  './config/archs/BSD-x86/asm/crypto/bn/x86-mont.S',
  './config/archs/BSD-x86/asm/crypto/camellia/cmll-x86.S',
  './config/archs/BSD-x86/asm/crypto/chacha/chacha-x86.S',
  './config/archs/BSD-x86/asm/crypto/des/crypt586.S',
  './config/archs/BSD-x86/asm/crypto/des/des-586.S',
   './config/archs/BSD-x86/asm/crypto/ec/ecp_nistz256-x86.S',
  './config/archs/BSD-x86/asm/crypto/x86cpuid.S',
  './config/archs/BSD-x86/asm/crypto/md5/md5-586.S',
  './config/archs/BSD-x86/asm/crypto/modes/ghash-x86.S',
  './config/archs/BSD-x86/asm/crypto/poly1305/poly1305-x86.S',
  './config/archs/BSD-x86/asm/crypto/rc4/rc4-586.S',
  './config/archs/BSD-x86/asm/crypto/ripemd/rmd-586.S',
  './config/archs/BSD-x86/asm/crypto/sha/sha1-586.S',
  './config/archs/BSD-x86/asm/crypto/sha/sha256-586.S',
  './config/archs/BSD-x86/asm/crypto/sha/sha512-586.S',
  './config/archs/BSD-x86/asm/crypto/whrlpool/wp-mmx.S',
  './config/archs/BSD-x86/asm/engines/e_padlock-x86.S',
  './config/archs/BSD-x86/asm/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_ec_gen.c',
   './config/archs/BSD-x86/asm/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86/asm/providers/common/der/der_wrap_gen.c',
  './config/archs/BSD-x86/asm/providers/legacy.ld',
```

```
    './config/archs/BSD-x86/asm/providers/fips.ld',

  ],
  'openssl_defines_BSD-x86': [
    'NDEBUG',
    'L_ENDIAN',
    'OPENSSL_BUILDING_OPENSSL',
    'AES_ASM',
    'DES_ASM',
    'ECP_NISTZ256_ASM',
    'FIPS_MODULE',
    'GHASH_ASM',
    'OPENSSL_BN_ASM_GF2m',
    'OPENSSL_BN_ASM_MONT',
    'OPENSSL_BN_ASM_PART_WORDS',
    'OPENSSL_CPUID_OBJ',
    'OPENSSL_IA32_SSE2',
    'SHA1_ASM',
    'SHA256_ASM',
    'SHA512_ASM',
    'VPAES_ASM',
    'FIPS_MODULE',
  ],
  'openssl_cflags_BSD-x86': [
    '-Wa,--noexecstack',
    '-Wall -O3 -fomit-frame-pointer',
    '-pthread',
    '-Wall -O3 -fomit-frame-pointer',
  ],
  'openssl_ex_libs_BSD-x86': [
    '-pthread',
   ],
  'linker_script': ''
 },
 'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86)'],
 'cflags': ['<@(openssl_cflags_BSD-x86)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86)'],

 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
```

```
  'defines': ['<@(openssl_defines_BSD-x86)'],
 },
}
```

The ISC License

Copyright (c) 2010-2023 Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/opensslv.h.in
*
* Copyright 1999-2020 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#ifndef OPENSSL_OPENSSLV_H
# define OPENSSL_OPENSSLV_H
# pragma once

# ifdef  __cplusplus
extern "C" {
# endif

/*
* SECTION 1: VERSION DATA.  These will change for each release
*/

/*
* Base version macros
*
* These macros express version number MAJOR.MINOR.PATCH exactly
*/
# define OPENSSL_VERSION_MAJOR  3
```

```
# define OPENSSL_VERSION_MINOR  0
# define OPENSSL_VERSION_PATCH  16

/*
* Additional version information
*
* These are also part of the new version scheme, but aren't part
* of the version number itself.
*/

/* Could be: #define OPENSSL_VERSION_PRE_RELEASE
 "-alpha.1" */
# define OPENSSL_VERSION_PRE_RELEASE ""
/* Could be: #define OPENSSL_VERSION_BUILD_METADATA "+fips" */
/* Could be: #define OPENSSL_VERSION_BUILD_METADATA "+vendor.1" */
# define OPENSSL_VERSION_BUILD_METADATA ""

/*
* Note: The OpenSSL Project will never define OPENSSL_VERSION_BUILD_METADATA
* to be anything but the empty string.  Its use is entirely reserved for
* others
*/

/*
* Shared library version
*
* This is strictly to express ABI version, which may or may not
* be related to the API version expressed with the macros above.
* This is defined in free form.
*/
# define OPENSSL_SHLIB_VERSION 3

/*
* SECTION 2: USEFUL MACROS
*/

/* For checking general API compatibility when preprocessing */
# define OPENSSL_VERSION_PREREQ(maj,min)                         \
  ((OPENSSL_VERSION_MAJOR << 16) + OPENSSL_VERSION_MINOR >= ((maj) << 16) + (min))

/*
* Macros to get the version in easily digested string form, both the short
* "MAJOR.MINOR.PATCH" variant
 (where MAJOR, MINOR and PATCH are replaced
* with the values from the corresponding OPENSSL_VERSION_ macros) and the
* longer variant with OPENSSL_VERSION_PRE_RELEASE_STR and
* OPENSSL_VERSION_BUILD_METADATA_STR appended.
*/
```

```
# define OPENSSL_VERSION_STR "3.0.16"
# define OPENSSL_FULL_VERSION_STR "3.0.16"

/*
* SECTION 3: ADDITIONAL METADATA
*
* These strings are defined separately to allow them to be parsable.
*/
# define OPENSSL_RELEASE_DATE "11 Feb 2025"

/*
* SECTION 4: BACKWARD COMPATIBILITY
*/

# define OPENSSL_VERSION_TEXT "OpenSSL 3.0.16 11 Feb 2025"

/* Synthesize OPENSSL_VERSION_NUMBER with the layout 0xMNN00PPSL */
# ifdef OPENSSL_VERSION_PRE_RELEASE
#  define _OPENSSL_VERSION_PRE_RELEASE 0x0L
# else
#  define _OPENSSL_VERSION_PRE_RELEASE 0xfL
# endif
# define OPENSSL_VERSION_NUMBER         \
  ( (OPENSSL_VERSION_MAJOR<<28)       \
    |(OPENSSL_VERSION_MINOR<<20)      \
    |(OPENSSL_VERSION_PATCH<<4)       \
    |_OPENSSL_VERSION_PRE_RELEASE )

#
 ifdef  __cplusplus
}
# endif

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_OPENSSLV_H
# endif

#endif                  /* OPENSSL_OPENSSLV_H */
```

The << Software identified by reference to the Ecma Standard* (Software)>> is protected by copyright and is being

made available under the BSD License, included below. This Software may be subject to third party rights (rights from parties other than Ecma International), including patent rights, and no licenses under such third party rights are granted under this license even if the third party concerned is a member of Ecma International. SEE THE ECMA
CODE OF CONDUCT IN PATENT MATTERS AVAILABLE AT http://www.ecma-international.org/memento/codeofconduct.htm FOR
INFORMATION REGARDING THE LICENSING OF PATENT CLAIMS THAT ARE REQUIRED TO

IMPLEMENT ECMA INTERNATIONAL STANDARDS*.

Copyright <<2012>> <<Ecma International>>
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the authors nor Ecma International may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE ECMA INTERNATIONAL "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL ECMA INTERNATIONAL BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

* Ecma International Standards hereafter means Ecma International Standards as well as Ecma Technical Reports

Copyright (c) 2011-2016 Heather Arthur <fayearthur@gmail.com>

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND

NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
MIT License

Copyright (c) Sindre Sorhus <sindresorhus@gmail.com> (https://sindresorhus.com)
Copyright (c) Paul Miller (https://paulmillr.com)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
{
 'variables': {
  'openssl_defines_BSD-x86': [
   'NDEBUG',
   'L_ENDIAN',
   'OPENSSL_BUILDING_OPENSSL',
   'AES_ASM',
   'CMLL_ASM',
   'DES_ASM',
   'ECP_NISTZ256_ASM',
   'GHASH_ASM',
   'MD5_ASM',
   'OPENSSL_BN_ASM_GF2m',
   'OPENSSL_BN_ASM_MONT',
   'OPENSSL_BN_ASM_PART_WORDS',
   'OPENSSL_CPUID_OBJ',
   'OPENSSL_IA32_SSE2',
   'PADLOCK_ASM',
   'POLY1305_ASM',
   'RC4_ASM',
   'RMD160_ASM',
   'SHA1_ASM',
   'SHA256_ASM',

```
  'SHA512_ASM',
  'VPAES_ASM',
  'WHIRLPOOL_ASM',
  'OPENSSL_PIC',
 ],
 'openssl_cflags_BSD-x86': [
  '-Wa,--noexecstack',
  '-Wall -O3 -fomit-frame-pointer',
  '-pthread',
  '-Wall -O3 -fomit-frame-pointer',
 ],
 'openssl_ex_libs_BSD-x86': [
  '-pthread',
 ],
 'openssl_cli_srcs_BSD-x86': [
  'openssl/apps/lib/cmp_mock_srv.c',
  'openssl/apps/asn1parse.c',
  'openssl/apps/ca.c',
  'openssl/apps/ciphers.c',
  'openssl/apps/cmp.c',
   'openssl/apps/cms.c',
  'openssl/apps/crl.c',
  'openssl/apps/crl2pkcs7.c',
  'openssl/apps/dgst.c',
  'openssl/apps/dhparam.c',
  'openssl/apps/dsa.c',
  'openssl/apps/dsaparam.c',
  'openssl/apps/ec.c',
  'openssl/apps/ecparam.c',
  'openssl/apps/enc.c',
  'openssl/apps/engine.c',
  'openssl/apps/errstr.c',
  'openssl/apps/fipsinstall.c',
  'openssl/apps/gendsa.c',
  'openssl/apps/genpkey.c',
  'openssl/apps/genrsa.c',
  'openssl/apps/info.c',
  'openssl/apps/kdf.c',
  'openssl/apps/list.c',
  'openssl/apps/mac.c',
  'openssl/apps/nseq.c',
  'openssl/apps/ocsp.c',
  'openssl/apps/openssl.c',
  'openssl/apps/passwd.c',
  'openssl/apps/pkcs12.c',
  'openssl/apps/pkcs7.c',
  'openssl/apps/pkcs8.c',
  'openssl/apps/pkey.c',
```

```
    'openssl/apps/pkeyparam.c',
    'openssl/apps/pkeyutl.c',
    'openssl/apps/prime.c',
    './config/archs/BSD-x86/asm_avx2/apps/progs.c',
     'openssl/apps/rand.c',
    'openssl/apps/rehash.c',
    'openssl/apps/req.c',
    'openssl/apps/rsa.c',
    'openssl/apps/rsautl.c',
    'openssl/apps/s_client.c',
    'openssl/apps/s_server.c',
    'openssl/apps/s_time.c',
    'openssl/apps/sess_id.c',
    'openssl/apps/smime.c',
    'openssl/apps/speed.c',
    'openssl/apps/spkac.c',
    'openssl/apps/srp.c',
    'openssl/apps/storeutl.c',
    'openssl/apps/ts.c',
    'openssl/apps/verify.c',
    'openssl/apps/version.c',
    'openssl/apps/x509.c',
    'openssl/apps/lib/app_libctx.c',
    'openssl/apps/lib/app_params.c',
    'openssl/apps/lib/app_provider.c',
    'openssl/apps/lib/app_rand.c',
    'openssl/apps/lib/app_x509.c',
    'openssl/apps/lib/apps.c',
    'openssl/apps/lib/apps_ui.c',
    'openssl/apps/lib/columns.c',
    'openssl/apps/lib/engine.c',
    'openssl/apps/lib/engine_loader.c',
    'openssl/apps/lib/fmt.c',
    'openssl/apps/lib/http_server.c',

 'openssl/apps/lib/names.c',
    'openssl/apps/lib/opt.c',
    'openssl/apps/lib/s_cb.c',
    'openssl/apps/lib/s_socket.c',
    'openssl/apps/lib/tlssrp_depr.c',
  ],
},
'defines': ['<@(openssl_defines_BSD-x86)'],
'include_dirs': [
  './include',
],
'cflags' : ['<@(openssl_cflags_BSD-x86)'],
'libraries': ['<@(openssl_ex_libs_BSD-x86)'],
```

'sources': ['<@(openssl_cli_srcs_BSD-x86)'],
}
The MIT License (MIT)

Copyright (c) Isaac Z. Schlueter and Contributors
Copyright (c) 2016 David Frank

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.

Note: This is a derivative work based on "node-fetch" by David Frank,
modified and distributed under the terms of the MIT license above.
https://github.com/bitinn/node-fetch
Blue Oak Model License

Version 1.0.0

Purpose

This license gives everyone as much permission to work with
this software as possible, while protecting contributors
from liability.

Acceptance

In order to receive this license, you must agree to its
rules. The rules of this license are both obligations
under that agreement and conditions to your license.
You must not do anything with this software that triggers
a rule that you cannot or will not follow.

Copyright

Each contributor licenses you to do everything with this
software that would otherwise infringe that contributor's
copyright in it.

Notices

You must ensure that everyone who gets a copy of
any part of this software from you, with or without
changes, also gets the text of this license or a link to
<https://blueoakcouncil.org/license/1.0.0>.

Excuse

If anyone notifies you in writing that you have not
complied with [Notices](#notices), you can keep your
license by taking all practical steps to comply within 30
days
 after the notice. If you do not do so, your license
ends immediately.

Patent

Each contributor licenses you to do everything with this
software that would otherwise infringe any patent claims
they can license or become able to license.

Reliability

No contributor can revoke this license.

No Liability

**_As far as the law allows, this software comes as is,
without any warranty or condition, and no contributor
will be liable to anyone for any damages related to this
software or this license, under any kind of legal claim._**
Attribution 4.0 International

===

Creative Commons Corporation ("Creative Commons") is not a law firm and
does not provide legal services or legal advice. Distribution of
Creative Commons public licenses does not create a lawyer-client or
other relationship. Creative Commons makes its licenses and related
information available on an "as-is" basis. Creative Commons gives no

warranties regarding its licenses, any material licensed under their terms and conditions, or any related information. Creative Commons disclaims all liability for damages resulting from their use to the fullest extent possible.

Using Creative Commons Public Licenses

Creative Commons public licenses provide a standard set of terms and conditions that creators and other rights holders may use to share original works of authorship and other material subject to copyright and certain other rights specified in the public license below. The following considerations
are for informational purposes only, are not
exhaustive, and do not form part of our licenses.

Considerations for licensors: Our public licenses are intended for use by those authorized to give the public permission to use material in ways otherwise restricted by copyright and certain other rights. Our licenses are irrevocable. Licensors should read and understand the terms and conditions of the license they choose before applying it. Licensors should also secure all rights necessary before applying our licenses so that the public can reuse the material as expected. Licensors should clearly mark any material not subject to the license. This includes other CC-licensed material, or material used under an exception or limitation to copyright. More considerations for licensors:
wiki.creativecommons.org/Considerations_for_licensors

Considerations for the public: By using one of our public licenses, a licensor
grants the public permission to use the
licensed material under specified terms and conditions. If the licensor's permission is not necessary for any reason--for example, because of any applicable exception or limitation to copyright--then that use is not regulated by the license. Our licenses grant only permissions under copyright and certain other rights that a licensor has authority to grant. Use of the licensed material may still be restricted for other reasons, including because others have copyright or other rights in the material. A licensor may make special requests, such as asking that all changes be marked or described. Although not required by our licenses, you are encouraged to respect those requests where reasonable. More_considerations for the public:
wiki.creativecommons.org/Considerations_for_licensees

==========

Creative Commons Attribution
4.0 International Public License

By exercising the Licensed Rights (defined below), You accept and agree to be bound by the terms and conditions of this Creative Commons Attribution 4.0 International Public License ("Public License"). To the extent this Public License may be interpreted as a contract, You are granted the Licensed Rights in consideration of Your acceptance of these terms and conditions, and the Licensor grants You such rights in consideration of benefits the Licensor receives from making the Licensed Material available under these terms and conditions.

Section 1 -- Definitions.

a. Adapted Material means material subject to Copyright and Similar Rights that is derived from or based upon the Licensed Material and in which the Licensed Material is translated, altered, arranged, transformed, or otherwise modified in a manner requiring permission under the Copyright and Similar Rights held by the Licensor. For purposes of this Public License, where the Licensed Material is a musical work, performance, or sound recording, Adapted Material is always produced where the Licensed Material is synched in timed relation with a moving image.

b. Adapter's License means the license You apply to Your Copyright and Similar Rights in Your contributions to Adapted Material in accordance with the terms and conditions of this Public License.

c. Copyright and Similar Rights means copyright and/or similar rights closely related to copyright including, without limitation, performance, broadcast, sound recording, and Sui Generis Database Rights, without regard to how the rights are labeled or categorized. For purposes of this Public License, the rights specified in Section 2(b)(1)-(2) are not Copyright and Similar Rights.

d. Effective Technological Measures means those measures that, in the absence of proper authority, may not be circumvented under laws fulfilling obligations under Article 11 of the WIPO Copyright Treaty adopted on December 20, 1996, and/or similar international agreements.

e. Exceptions and Limitations means fair use, fair dealing, and/or any other exception or limitation to Copyright and Similar Rights

that applies to Your use of the Licensed Material.

f. Licensed Material means the artistic or literary work, database, or other material to which the Licensor applied this Public License.

g. Licensed Rights means the rights granted to You subject to the terms and conditions of this Public License, which are limited to all Copyright and Similar Rights that apply to Your use of the Licensed Material and that the Licensor has authority to license.

h. Licensor means the individual(s) or entity(ies) granting rights under this Public License.

i. Share means to provide material to the public by any means or process that requires permission under the Licensed Rights, such as reproduction, public display, public performance, distribution, dissemination, communication, or importation, and to make material available to the public including in ways that members of the public may access the material from a place and at a time individually chosen by them.

j. Sui Generis Database Rights means rights other than copyright resulting from Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, as amended and/or succeeded, as well as other essentially equivalent rights anywhere in the world.

k. You means the individual or entity exercising the Licensed Rights under this Public License. Your has a corresponding meaning.

Section 2 -- Scope.

a. License grant.

1. Subject to the terms and conditions of this Public License, the Licensor hereby grants You a worldwide, royalty-free, non-sublicensable, non-exclusive, irrevocable license to exercise the Licensed Rights in the Licensed Material to:

a. reproduce and Share the Licensed Material, in whole or in part; and

b. produce, reproduce, and Share Adapted Material.

2. Exceptions and Limitations. For the avoidance of doubt, where

Exceptions and Limitations apply to Your use, this Public License does not apply, and You do not need to comply with its terms and conditions.

3. Term. The term of this Public License is specified in Section 6(a).

4. Media and formats; technical modifications allowed. The Licensor authorizes You to exercise the Licensed Rights in all media and formats whether now known or hereafter created, and to make technical modifications necessary to do so. The Licensor waives and/or agrees not to assert any right or authority to forbid You from making technical modifications necessary to exercise the Licensed Rights, including technical modifications necessary to circumvent Effective Technological Measures. For purposes of this Public License, simply making modifications authorized by this Section 2(a)(4) never produces Adapted Material.

5. Downstream recipients.

a. Offer from the Licensor -- Licensed Material. Every recipient of the Licensed Material automatically receives an offer from the Licensor to exercise the Licensed Rights under the terms and conditions of this Public License.

b. No downstream restrictions. You may not offer or impose any additional or different terms or conditions on, or apply any Effective Technological Measures to, the Licensed Material if doing so restricts exercise of the Licensed Rights by any recipient of the Licensed

Material.

6. No endorsement. Nothing in this Public License constitutes or may be construed as permission to assert or imply that You are, or that Your use of the Licensed Material is, connected with, or sponsored, endorsed, or granted official status by, the Licensor or others designated to receive attribution as provided in Section 3(a)(1)(A)(i).

b. Other rights.

1. Moral rights, such as the right of integrity, are not licensed under this Public License, nor are publicity, privacy, and/or other similar personality rights; however, to the extent possible, the Licensor waives and/or agrees not to

assert any such rights held by the Licensor to the limited extent necessary to allow You to exercise the Licensed Rights, but not otherwise.

2. Patent and trademark rights are not licensed under this Public License.

3. To the extent possible, the Licensor waives any right to collect royalties from You for the exercise of the Licensed Rights, whether directly or through a collecting society under any voluntary or waivable statutory or compulsory licensing scheme. In all other cases the Licensor expressly reserves any right to collect such royalties.

Section 3 -- License Conditions.

Your exercise of the Licensed Rights is expressly made subject to the following conditions.

a. Attribution.

1. If You Share the Licensed Material (including in modified form), You must:

a. retain the following if it is supplied by the Licensor with the Licensed Material:

i. identification of the creator(s) of the Licensed Material and any others designated to receive attribution, in any reasonable manner requested by the Licensor (including by pseudonym if

designated);

ii. a copyright notice;

iii. a notice that refers to this Public License;

iv. a notice that refers to the disclaimer of warranties;

v. a URI or hyperlink to the Licensed Material to the extent reasonably practicable;

b. indicate if You modified the Licensed Material and retain an indication of any previous modifications; and

c. indicate the Licensed Material is licensed under this Public License, and include the text of, or the URI or hyperlink to, this Public License.

2. You may satisfy the conditions in Section 3(a)(1) in any reasonable manner based on the medium, means, and context in which You Share the Licensed Material. For example, it may be reasonable to satisfy the conditions by providing a URI or hyperlink to a resource that
includes the required
information.

3. If requested by the Licensor, You must remove any of the information required by Section 3(a)(1)(A) to the extent reasonably practicable.

4. If You Share Adapted Material You produce, the Adapter's License You apply must not prevent recipients of the Adapted Material from complying with this Public License.

Section 4 -- Sui Generis Database Rights.

Where the Licensed Rights include Sui Generis Database Rights that apply to Your use of the Licensed Material:

a. for the avoidance of doubt, Section 2(a)(1) grants You the right to extract, reuse, reproduce, and Share all or a substantial portion of the contents of the database;

b. if You include all or a substantial portion of the database contents in a database in which You have Sui Generis Database Rights, then the database in which You have Sui Generis Database Rights (but not its individual contents)
is Adapted Material; and

c. You must comply with the conditions in Section 3(a) if You Share all or a substantial portion of the contents of the database.

For the avoidance of doubt, this Section 4 supplements and does not replace Your obligations under this Public License where the Licensed Rights include other Copyright and Similar Rights.

Section 5 -- Disclaimer of Warranties and Limitation of Liability.

a. UNLESS OTHERWISE SEPARATELY UNDERTAKEN BY THE LICENSOR, TO THE

EXTENT POSSIBLE, THE LICENSOR OFFERS THE LICENSED MATERIAL AS-IS AND AS-AVAILABLE, AND MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND CONCERNING THE LICENSED MATERIAL, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHER. THIS INCLUDES, WITHOUT LIMITATION, WARRANTIES OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OR ABSENCE OF ERRORS, WHETHER OR NOT KNOWN OR DISCOVERABLE.

WHERE DISCLAIMERS OF WARRANTIES ARE NOT ALLOWED IN FULL OR IN PART, THIS DISCLAIMER MAY NOT APPLY TO YOU.

b. TO THE EXTENT POSSIBLE, IN NO EVENT WILL THE LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE) OR OTHERWISE FOR ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY, OR OTHER LOSSES, COSTS, EXPENSES, OR DAMAGES ARISING OUT OF THIS PUBLIC LICENSE OR USE OF THE LICENSED MATERIAL, EVEN IF THE LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES, COSTS, EXPENSES, OR DAMAGES. WHERE A LIMITATION OF LIABILITY IS NOT ALLOWED IN FULL OR IN PART, THIS LIMITATION MAY NOT APPLY TO YOU.

c. The disclaimer of warranties and limitation of liability provided above shall be interpreted in a manner that, to the extent possible, most closely approximates an absolute disclaimer and waiver of all liability.

Section 6 -- Term and Termination.

a. This Public License applies for the term of the Copyright and Similar Rights licensed here. However, if You fail to comply with this Public License, then Your rights under this Public License terminate automatically.

b. Where Your right to use the Licensed Material has terminated under Section 6(a), it reinstates:

1. automatically as of the date the violation is cured, provided it is cured within 30 days of Your discovery of the violation; or

2. upon express reinstatement by the Licensor.

For the avoidance of doubt, this Section 6(b) does not affect any right the Licensor may have to seek remedies for Your violations of this Public License.

c. For the avoidance of doubt, the Licensor may also offer the
Licensed Material under separate terms or conditions or stop
distributing the Licensed Material at any time; however, doing so
will not terminate this Public License.

d. Sections 1, 5, 6, 7, and 8 survive termination
of this Public
License.

Section 7 -- Other Terms and Conditions.

a. The Licensor shall not be bound by any additional or different
terms or conditions communicated by You unless expressly agreed.

b. Any arrangements, understandings, or agreements regarding the
Licensed Material not stated herein are separate from and
independent of the terms and conditions of this Public License.

Section 8 -- Interpretation.

a. For the avoidance of doubt, this Public License does not, and
shall not be interpreted to, reduce, limit, restrict, or impose
conditions on any use of the Licensed Material that could lawfully
be made without permission under this Public License.

b. To the extent possible, if any provision of this Public License is
deemed unenforceable, it shall be automatically reformed to the
minimum extent necessary to make it enforceable. If the provision
cannot be reformed, it shall be severed from this Public License
without affecting the enforceability of the remaining terms and
conditions.

c. No term or condition of this Public License will be waived and no
failure to comply consented to unless expressly agreed to by the
Licensor.

d. Nothing in this Public License constitutes or may be interpreted
as a limitation upon, or waiver of, any privileges and immunities
that apply to the Licensor or You, including from the legal
processes of any jurisdiction or authority.

==========

Creative Commons is not a party to its public
licenses. Notwithstanding, Creative Commons may elect to apply one of

its public licenses to material it publishes and in those instances will be considered the Licensor. The text of the Creative Commons public licenses is dedicated to the public domain under the CC0 Public Domain Dedication. Except for the limited purpose of indicating that material is shared under a Creative Commons public license or as otherwise permitted by the Creative Commons policies published at creativecommons.org/policies, Creative Commons does not authorize the use of the trademark "Creative Commons" or any other trademark or logo of Creative Commons without its prior written consent including, without limitation, in connection with any unauthorized modifications to any of its public licenses or any other arrangements, understandings, or agreements concerning use of licensed material. For the avoidance of doubt, this paragraph does not form part of the public licenses.

Creative Commons may be contacted at creativecommons.org.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable

(except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,

and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/cmp.h.in
*
* Copyright 2007-2023 The OpenSSL Project Authors. All Rights Reserved.
* Copyright Nokia 2007-2019
* Copyright Siemens AG 2015-2019
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_CMP_H
# define OPENSSL_CMP_H

# include <openssl/opensslconf.h>
# ifndef OPENSSL_NO_CMP

#  include <openssl/crmf.h>
#  include <openssl/cmperr.h>
#  include <openssl/cmp_util.h>
#  include <openssl/http.h>

/* explicit #includes not strictly needed since implied by the above: */
#  include <openssl/types.h>
#  include <openssl/safestack.h>
#  include <openssl/x509.h>
#  include <openssl/x509v3.h>

#  ifdef __cplusplus
extern "C" {
#  endif

#  define OSSL_CMP_PVNO 2
```

```
/*-
*   PKIFailureInfo ::=
 BIT STRING {
*   -- since we can fail in more than one way!
*   -- More codes may be added in the future if/when required.
*      badAlg               (0),
*      -- unrecognized or unsupported Algorithm Identifier
*      badMessageCheck     (1),
*      -- integrity check failed (e.g., signature did not verify)
*      badRequest          (2),
*      -- transaction not permitted or supported
*      badTime             (3),
*      -- messageTime was not sufficiently close to the system time,
*      -- as defined by local policy
*      badCertId           (4),
*      -- no certificate could be found matching the provided criteria
*      badDataFormat       (5),
*      -- the data submitted has the wrong format
*      wrongAuthority      (6),
*      -- the authority indicated in the request is different from the
*      -- one creating the response token
*      incorrectData       (7),
*      -- the requester's data is incorrect (for notary services)
*
      missingTimeStamp    (8),
*      -- when the timestamp is missing but should be there
*      -- (by policy)
*      badPOP              (9),
*      -- the proof-of-possession failed
*      certRevoked         (10),
*        -- the certificate has already been revoked
*      certConfirmed       (11),
*        -- the certificate has already been confirmed
*      wrongIntegrity      (12),
*        -- invalid integrity, password based instead of signature or
*        -- vice versa
*      badRecipientNonce   (13),
*        -- invalid recipient nonce, either missing or wrong value
*      timeNotAvailable    (14),
*        -- the TSA's time source is not available
*      unacceptedPolicy    (15),
*        -- the requested TSA policy is not supported by the TSA.
*      unacceptedExtension (16),
*        -- the requested extension is not supported by the TSA.
*      addInfoNotAvailable (17),
*        -- the additional information requested
```

```
 could not be
*         -- understood or is not available
*       badSenderNonce      (18),
*         -- invalid sender nonce, either missing or wrong size
*       badCertTemplate     (19),
*         -- invalid cert. template or missing mandatory information
*       signerNotTrusted    (20),
*         -- signer of the message unknown or not trusted
*       transactionIdInUse  (21),
*         -- the transaction identifier is already in use
*       unsupportedVersion  (22),
*         -- the version of the message is not supported
*       notAuthorized       (23),
*         -- the sender was not authorized to make the preceding
*         -- request or perform the preceding action
*       systemUnavail       (24),
*       -- the request cannot be handled due to system unavailability
*       systemFailure       (25),
*       -- the request cannot be handled due to system failure
*       duplicateCertReq    (26)
*       -- certificate cannot be issued because a duplicate
 *       -- certificate already exists
*   }
*/
#  define OSSL_CMP_PKIFAILUREINFO_badAlg 0
#  define OSSL_CMP_PKIFAILUREINFO_badMessageCheck 1
#  define OSSL_CMP_PKIFAILUREINFO_badRequest 2
#  define OSSL_CMP_PKIFAILUREINFO_badTime 3
#  define OSSL_CMP_PKIFAILUREINFO_badCertId 4
#  define OSSL_CMP_PKIFAILUREINFO_badDataFormat 5
#  define OSSL_CMP_PKIFAILUREINFO_wrongAuthority 6
#  define OSSL_CMP_PKIFAILUREINFO_incorrectData 7
#  define OSSL_CMP_PKIFAILUREINFO_missingTimeStamp 8
#  define OSSL_CMP_PKIFAILUREINFO_badPOP 9
#  define OSSL_CMP_PKIFAILUREINFO_certRevoked 10
#  define OSSL_CMP_PKIFAILUREINFO_certConfirmed 11
#  define OSSL_CMP_PKIFAILUREINFO_wrongIntegrity 12
#  define OSSL_CMP_PKIFAILUREINFO_badRecipientNonce 13
#  define OSSL_CMP_PKIFAILUREINFO_timeNotAvailable 14
#  define OSSL_CMP_PKIFAILUREINFO_unacceptedPolicy 15
#  define OSSL_CMP_PKIFAILUREINFO_unacceptedExtension 16
#  define OSSL_CMP_PKIFAILUREINFO_addInfoNotAvailable 17
#  define OSSL_CMP_PKIFAILUREINFO_badSenderNonce
 18
#  define OSSL_CMP_PKIFAILUREINFO_badCertTemplate 19
#  define OSSL_CMP_PKIFAILUREINFO_signerNotTrusted 20
#  define OSSL_CMP_PKIFAILUREINFO_transactionIdInUse 21
#  define OSSL_CMP_PKIFAILUREINFO_unsupportedVersion 22
```

```
# define OSSL_CMP_PKIFAILUREINFO_notAuthorized 23
# define OSSL_CMP_PKIFAILUREINFO_systemUnavail 24
# define OSSL_CMP_PKIFAILUREINFO_systemFailure 25
# define OSSL_CMP_PKIFAILUREINFO_duplicateCertReq 26
# define OSSL_CMP_PKIFAILUREINFO_MAX 26
# define OSSL_CMP_PKIFAILUREINFO_MAX_BIT_PATTERN \
  ((1 << (OSSL_CMP_PKIFAILUREINFO_MAX + 1)) - 1)
# if OSSL_CMP_PKIFAILUREINFO_MAX_BIT_PATTERN > INT_MAX
#  error CMP_PKIFAILUREINFO_MAX bit pattern does not fit in type int
# endif

typedef ASN1_BIT_STRING OSSL_CMP_PKIFAILUREINFO;

# define OSSL_CMP_CTX_FAILINFO_badAlg (1 << 0)
# define OSSL_CMP_CTX_FAILINFO_badMessageCheck (1 << 1)
# define OSSL_CMP_CTX_FAILINFO_badRequest (1 << 2)
# define OSSL_CMP_CTX_FAILINFO_badTime (1 << 3)
# define OSSL_CMP_CTX_FAILINFO_badCertId
 (1 << 4)
# define OSSL_CMP_CTX_FAILINFO_badDataFormat (1 << 5)
# define OSSL_CMP_CTX_FAILINFO_wrongAuthority (1 << 6)
# define OSSL_CMP_CTX_FAILINFO_incorrectData (1 << 7)
# define OSSL_CMP_CTX_FAILINFO_missingTimeStamp (1 << 8)
# define OSSL_CMP_CTX_FAILINFO_badPOP (1 << 9)
# define OSSL_CMP_CTX_FAILINFO_certRevoked (1 << 10)
# define OSSL_CMP_CTX_FAILINFO_certConfirmed (1 << 11)
# define OSSL_CMP_CTX_FAILINFO_wrongIntegrity (1 << 12)
# define OSSL_CMP_CTX_FAILINFO_badRecipientNonce (1 << 13)
# define OSSL_CMP_CTX_FAILINFO_timeNotAvailable (1 << 14)
# define OSSL_CMP_CTX_FAILINFO_unacceptedPolicy (1 << 15)
# define OSSL_CMP_CTX_FAILINFO_unacceptedExtension (1 << 16)
# define OSSL_CMP_CTX_FAILINFO_addInfoNotAvailable (1 << 17)
# define OSSL_CMP_CTX_FAILINFO_badSenderNonce (1 << 18)
# define OSSL_CMP_CTX_FAILINFO_badCertTemplate (1 << 19)
# define OSSL_CMP_CTX_FAILINFO_signerNotTrusted (1 << 20)
# define OSSL_CMP_CTX_FAILINFO_transactionIdInUse (1
 << 21)
# define OSSL_CMP_CTX_FAILINFO_unsupportedVersion (1 << 22)
# define OSSL_CMP_CTX_FAILINFO_notAuthorized (1 << 23)
# define OSSL_CMP_CTX_FAILINFO_systemUnavail (1 << 24)
# define OSSL_CMP_CTX_FAILINFO_systemFailure (1 << 25)
# define OSSL_CMP_CTX_FAILINFO_duplicateCertReq (1 << 26)

/*-
*   PKIStatus ::= INTEGER {
*       accepted              (0),
*       -- you got exactly what you asked for
*       grantedWithMods       (1),
```

```
*       -- you got something like what you asked for; the
*       -- requester is responsible for ascertaining the differences
*       rejection              (2),
*       -- you don't get it, more information elsewhere in the message
*       waiting                (3),
*       -- the request body part has not yet been processed; expect to
*       -- hear more later (note: proper handling of this status
*       -- response MAY use the polling req/rep PKIMessages specified
*       -- in Section 5.3.22; alternatively, polling in the underlying
 *       -- transport layer MAY have some utility in this regard)
*       revocationWarning      (4),
*       -- this message contains a warning that a revocation is
*       -- imminent
*       revocationNotification (5),
*       -- notification that a revocation has occurred
*       keyUpdateWarning       (6)
*       -- update already done for the oldCertId specified in
*       -- CertReqMsg
*   }
*/
# define OSSL_CMP_PKISTATUS_request               -3
# define OSSL_CMP_PKISTATUS_trans                 -2
# define OSSL_CMP_PKISTATUS_unspecified           -1
# define OSSL_CMP_PKISTATUS_accepted              0
# define OSSL_CMP_PKISTATUS_grantedWithMods       1
# define OSSL_CMP_PKISTATUS_rejection             2
# define OSSL_CMP_PKISTATUS_waiting               3
# define OSSL_CMP_PKISTATUS_revocationWarning     4
# define OSSL_CMP_PKISTATUS_revocationNotification 5
# define OSSL_CMP_PKISTATUS_keyUpdateWarning      6

typedef ASN1_INTEGER OSSL_CMP_PKISTATUS;
DECLARE_ASN1_ITEM(OSSL_CMP_PKISTATUS)

#
 define OSSL_CMP_CERTORENCCERT_CERTIFICATE 0
# define OSSL_CMP_CERTORENCCERT_ENCRYPTEDCERT 1

/* data type declarations */
typedef struct ossl_cmp_ctx_st OSSL_CMP_CTX;
typedef struct ossl_cmp_pkiheader_st OSSL_CMP_PKIHEADER;
DECLARE_ASN1_FUNCTIONS(OSSL_CMP_PKIHEADER)
typedef struct ossl_cmp_msg_st OSSL_CMP_MSG;
DECLARE_ASN1_DUP_FUNCTION(OSSL_CMP_MSG)
DECLARE_ASN1_ENCODE_FUNCTIONS(OSSL_CMP_MSG, OSSL_CMP_MSG, OSSL_CMP_MSG)
typedef struct ossl_cmp_certstatus_st OSSL_CMP_CERTSTATUS;
SKM_DEFINE_STACK_OF_INTERNAL(OSSL_CMP_CERTSTATUS, OSSL_CMP_CERTSTATUS,
OSSL_CMP_CERTSTATUS)
```

#define sk_OSSL_CMP_CERTSTATUS_num(sk)
OPENSSL_sk_num(ossl_check_const_OSSL_CMP_CERTSTATUS_sk_type(sk))
#define sk_OSSL_CMP_CERTSTATUS_value(sk, idx) ((OSSL_CMP_CERTSTATUS
*)OPENSSL_sk_value(ossl_check_const_OSSL_CMP_CERTSTATUS_sk_type(sk), (idx)))
#define sk_OSSL_CMP_CERTSTATUS_new(cmp) ((STACK_OF(OSSL_CMP_CERTSTATUS)
*)OPENSSL_sk_new(ossl_check_OSSL_CMP_CERTSTATUS_compfunc_type(cmp)))
#define
sk_OSSL_CMP_CERTSTATUS_new_null() ((STACK_OF(OSSL_CMP_CERTSTATUS)
*)OPENSSL_sk_new_null())
#define sk_OSSL_CMP_CERTSTATUS_new_reserve(cmp, n) ((STACK_OF(OSSL_CMP_CERTSTATUS)
*)OPENSSL_sk_new_reserve(ossl_check_OSSL_CMP_CERTSTATUS_compfunc_type(cmp), (n)))
#define sk_OSSL_CMP_CERTSTATUS_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk), (n))
#define sk_OSSL_CMP_CERTSTATUS_free(sk)
OPENSSL_sk_free(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk))
#define sk_OSSL_CMP_CERTSTATUS_zero(sk)
OPENSSL_sk_zero(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk))
#define sk_OSSL_CMP_CERTSTATUS_delete(sk, i) ((OSSL_CMP_CERTSTATUS
*)OPENSSL_sk_delete(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk), (i)))
#define sk_OSSL_CMP_CERTSTATUS_delete_ptr(sk, ptr) ((OSSL_CMP_CERTSTATUS
*)OPENSSL_sk_delete_ptr(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk),
ossl_check_OSSL_CMP_CERTSTATUS_type(ptr)))
#define sk_OSSL_CMP_CERTSTATUS_push(sk, ptr)
OPENSSL_sk_push(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk),
ossl_check_OSSL_CMP_CERTSTATUS_type(ptr))
#define sk_OSSL_CMP_CERTSTATUS_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk),
ossl_check_OSSL_CMP_CERTSTATUS_type(ptr))
#define sk_OSSL_CMP_CERTSTATUS_pop(sk) ((OSSL_CMP_CERTSTATUS
*)OPENSSL_sk_pop(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk)))
#define sk_OSSL_CMP_CERTSTATUS_shift(sk) ((OSSL_CMP_CERTSTATUS
*)OPENSSL_sk_shift(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk)))
#define sk_OSSL_CMP_CERTSTATUS_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk),ossl_check_OSSL_CMP_CERTST
ATUS_freefunc_type(freefunc))
#define sk_OSSL_CMP_CERTSTATUS_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk),
ossl_check_OSSL_CMP_CERTSTATUS_type(ptr), (idx))
#define sk_OSSL_CMP_CERTSTATUS_set(sk, idx, ptr) ((OSSL_CMP_CERTSTATUS
*)OPENSSL_sk_set(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk), (idx),
ossl_check_OSSL_CMP_CERTSTATUS_type(ptr)))
#define sk_OSSL_CMP_CERTSTATUS_find(sk,
ptr) OPENSSL_sk_find(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk),
ossl_check_OSSL_CMP_CERTSTATUS_type(ptr))
#define sk_OSSL_CMP_CERTSTATUS_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk),
ossl_check_OSSL_CMP_CERTSTATUS_type(ptr))
#define sk_OSSL_CMP_CERTSTATUS_find_all(sk, ptr, pnum)

```
OPENSSL_sk_find_all(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk),
ossl_check_OSSL_CMP_CERTSTATUS_type(ptr), pnum)
#define sk_OSSL_CMP_CERTSTATUS_sort(sk)
OPENSSL_sk_sort(ossl_check_OSSL_CMP_CERTSTATUS_sk_type(sk))
#define sk_OSSL_CMP_CERTSTATUS_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OSSL_CMP_CERTSTATUS_sk_type(sk))
#define sk_OSSL_CMP_CERTSTATUS_dup(sk) ((STACK_OF(OSSL_CMP_CERTSTATUS)
*)OPENSSL_sk_dup(ossl_check_const_OSSL_CMP_CERTSTATUS_sk_type(sk)))
#define sk_OSSL_CMP_CERTSTATUS_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(OSSL_CMP_CERTSTATUS)
*)OPENSSL_sk_deep_copy(ossl_check_const_OSSL_CMP_CERTSTATUS_sk_type(sk),
ossl_check_OSSL_CMP_CERTSTATUS_copyfunc_type(copyfunc),
 ossl_check_OSSL_CMP_CERTSTATUS_freefunc_type(freefunc)))
#define sk_OSSL_CMP_CERTSTATUS_set_cmp_func(sk, cmp)
((sk_OSSL_CMP_CERTSTATUS_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OSSL_CMP_CERTSTAT
US_sk_type(sk), ossl_check_OSSL_CMP_CERTSTATUS_compfunc_type(cmp)))

typedef struct ossl_cmp_itav_st OSSL_CMP_ITAV;
DECLARE_ASN1_DUP_FUNCTION(OSSL_CMP_ITAV)
SKM_DEFINE_STACK_OF_INTERNAL(OSSL_CMP_ITAV, OSSL_CMP_ITAV, OSSL_CMP_ITAV)
#define sk_OSSL_CMP_ITAV_num(sk) OPENSSL_sk_num(ossl_check_const_OSSL_CMP_ITAV_sk_type(sk))
#define sk_OSSL_CMP_ITAV_value(sk, idx) ((OSSL_CMP_ITAV
*)OPENSSL_sk_value(ossl_check_const_OSSL_CMP_ITAV_sk_type(sk), (idx)))
#define sk_OSSL_CMP_ITAV_new(cmp) ((STACK_OF(OSSL_CMP_ITAV)
*)OPENSSL_sk_new(ossl_check_OSSL_CMP_ITAV_compfunc_type(cmp)))
#define sk_OSSL_CMP_ITAV_new_null() ((STACK_OF(OSSL_CMP_ITAV) *)OPENSSL_sk_new_null())
#define sk_OSSL_CMP_ITAV_new_reserve(cmp, n) ((STACK_OF(OSSL_CMP_ITAV)
*)OPENSSL_sk_new_reserve(ossl_check_OSSL_CMP_ITAV_compfunc_type(cmp),
 (n)))
#define sk_OSSL_CMP_ITAV_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_OSSL_CMP_ITAV_sk_type(sk),
(n))
#define sk_OSSL_CMP_ITAV_free(sk) OPENSSL_sk_free(ossl_check_OSSL_CMP_ITAV_sk_type(sk))
#define sk_OSSL_CMP_ITAV_zero(sk) OPENSSL_sk_zero(ossl_check_OSSL_CMP_ITAV_sk_type(sk))
#define sk_OSSL_CMP_ITAV_delete(sk, i) ((OSSL_CMP_ITAV
*)OPENSSL_sk_delete(ossl_check_OSSL_CMP_ITAV_sk_type(sk), (i)))
#define sk_OSSL_CMP_ITAV_delete_ptr(sk, ptr) ((OSSL_CMP_ITAV
*)OPENSSL_sk_delete_ptr(ossl_check_OSSL_CMP_ITAV_sk_type(sk),
ossl_check_OSSL_CMP_ITAV_type(ptr)))
#define sk_OSSL_CMP_ITAV_push(sk, ptr) OPENSSL_sk_push(ossl_check_OSSL_CMP_ITAV_sk_type(sk),
ossl_check_OSSL_CMP_ITAV_type(ptr))
#define sk_OSSL_CMP_ITAV_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_OSSL_CMP_ITAV_sk_type(sk), ossl_check_OSSL_CMP_ITAV_type(ptr))
#define sk_OSSL_CMP_ITAV_pop(sk) ((OSSL_CMP_ITAV
*)OPENSSL_sk_pop(ossl_check_OSSL_CMP_ITAV_sk_type(sk)))
#define sk_OSSL_CMP_ITAV_shift(sk) ((OSSL_CMP_ITAV
 *)OPENSSL_sk_shift(ossl_check_OSSL_CMP_ITAV_sk_type(sk)))
#define sk_OSSL_CMP_ITAV_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OSSL_CMP_ITAV_sk_type(sk),ossl_check_OSSL_CMP_ITAV_freefunc_ty
```

```
pe(freefunc))
#define sk_OSSL_CMP_ITAV_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OSSL_CMP_ITAV_sk_type(sk), ossl_check_OSSL_CMP_ITAV_type(ptr),
(idx))
#define sk_OSSL_CMP_ITAV_set(sk, idx, ptr) ((OSSL_CMP_ITAV
*)OPENSSL_sk_set(ossl_check_OSSL_CMP_ITAV_sk_type(sk), (idx),
ossl_check_OSSL_CMP_ITAV_type(ptr)))
#define sk_OSSL_CMP_ITAV_find(sk, ptr) OPENSSL_sk_find(ossl_check_OSSL_CMP_ITAV_sk_type(sk),
ossl_check_OSSL_CMP_ITAV_type(ptr))
#define sk_OSSL_CMP_ITAV_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OSSL_CMP_ITAV_sk_type(sk), ossl_check_OSSL_CMP_ITAV_type(ptr))
#define sk_OSSL_CMP_ITAV_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OSSL_CMP_ITAV_sk_type(sk), ossl_check_OSSL_CMP_ITAV_type(ptr),
pnum)
#define sk_OSSL_CMP_ITAV_sort(sk) OPENSSL_sk_sort(ossl_check_OSSL_CMP_ITAV_sk_type(sk))
#define
 sk_OSSL_CMP_ITAV_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_OSSL_CMP_ITAV_sk_type(sk))
#define sk_OSSL_CMP_ITAV_dup(sk) ((STACK_OF(OSSL_CMP_ITAV)
*)OPENSSL_sk_dup(ossl_check_const_OSSL_CMP_ITAV_sk_type(sk)))
#define sk_OSSL_CMP_ITAV_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OSSL_CMP_ITAV)
*)OPENSSL_sk_deep_copy(ossl_check_const_OSSL_CMP_ITAV_sk_type(sk),
ossl_check_OSSL_CMP_ITAV_copyfunc_type(copyfunc),
ossl_check_OSSL_CMP_ITAV_freefunc_type(freefunc)))
#define sk_OSSL_CMP_ITAV_set_cmp_func(sk, cmp)
((sk_OSSL_CMP_ITAV_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OSSL_CMP_ITAV_sk_type(sk),
ossl_check_OSSL_CMP_ITAV_compfunc_type(cmp)))

typedef struct ossl_cmp_revrepcontent_st OSSL_CMP_REVREPCONTENT;
typedef struct ossl_cmp_pkisi_st OSSL_CMP_PKISI;
DECLARE_ASN1_FUNCTIONS(OSSL_CMP_PKISI)
DECLARE_ASN1_DUP_FUNCTION(OSSL_CMP_PKISI)
SKM_DEFINE_STACK_OF_INTERNAL(OSSL_CMP_PKISI, OSSL_CMP_PKISI, OSSL_CMP_PKISI)
#define sk_OSSL_CMP_PKISI_num(sk) OPENSSL_sk_num(ossl_check_const_OSSL_CMP_PKISI_sk_type(sk))
#define
 sk_OSSL_CMP_PKISI_value(sk, idx) ((OSSL_CMP_PKISI
*)OPENSSL_sk_value(ossl_check_const_OSSL_CMP_PKISI_sk_type(sk), (idx)))
#define sk_OSSL_CMP_PKISI_new(cmp) ((STACK_OF(OSSL_CMP_PKISI)
*)OPENSSL_sk_new(ossl_check_OSSL_CMP_PKISI_compfunc_type(cmp)))
#define sk_OSSL_CMP_PKISI_new_null() ((STACK_OF(OSSL_CMP_PKISI) *)OPENSSL_sk_new_null())
#define sk_OSSL_CMP_PKISI_new_reserve(cmp, n) ((STACK_OF(OSSL_CMP_PKISI)
*)OPENSSL_sk_new_reserve(ossl_check_OSSL_CMP_PKISI_compfunc_type(cmp), (n)))
#define sk_OSSL_CMP_PKISI_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_OSSL_CMP_PKISI_sk_type(sk),
(n))
#define sk_OSSL_CMP_PKISI_free(sk) OPENSSL_sk_free(ossl_check_OSSL_CMP_PKISI_sk_type(sk))
#define sk_OSSL_CMP_PKISI_zero(sk) OPENSSL_sk_zero(ossl_check_OSSL_CMP_PKISI_sk_type(sk))
#define sk_OSSL_CMP_PKISI_delete(sk, i) ((OSSL_CMP_PKISI
*)OPENSSL_sk_delete(ossl_check_OSSL_CMP_PKISI_sk_type(sk), (i)))
#define sk_OSSL_CMP_PKISI_delete_ptr(sk, ptr)
```

((OSSL_CMP_PKISI *)OPENSSL_sk_delete_ptr(ossl_check_OSSL_CMP_PKISI_sk_type(sk),
ossl_check_OSSL_CMP_PKISI_type(ptr)))
#define sk_OSSL_CMP_PKISI_push(sk, ptr) OPENSSL_sk_push(ossl_check_OSSL_CMP_PKISI_sk_type(sk),
ossl_check_OSSL_CMP_PKISI_type(ptr))
#define sk_OSSL_CMP_PKISI_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_OSSL_CMP_PKISI_sk_type(sk), ossl_check_OSSL_CMP_PKISI_type(ptr))
#define sk_OSSL_CMP_PKISI_pop(sk) ((OSSL_CMP_PKISI
*)OPENSSL_sk_pop(ossl_check_OSSL_CMP_PKISI_sk_type(sk)))
#define sk_OSSL_CMP_PKISI_shift(sk) ((OSSL_CMP_PKISI
*)OPENSSL_sk_shift(ossl_check_OSSL_CMP_PKISI_sk_type(sk)))
#define sk_OSSL_CMP_PKISI_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OSSL_CMP_PKISI_sk_type(sk),ossl_check_OSSL_CMP_PKISI_freefunc_ty
pe(freefunc))
#define sk_OSSL_CMP_PKISI_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OSSL_CMP_PKISI_sk_type(sk), ossl_check_OSSL_CMP_PKISI_type(ptr),
(idx))
#define sk_OSSL_CMP_PKISI_set(sk, idx, ptr) ((OSSL_CMP_PKISI
*)OPENSSL_sk_set(ossl_check_OSSL_CMP_PKISI_sk_type(sk),
(idx), ossl_check_OSSL_CMP_PKISI_type(ptr)))
#define sk_OSSL_CMP_PKISI_find(sk, ptr) OPENSSL_sk_find(ossl_check_OSSL_CMP_PKISI_sk_type(sk),
ossl_check_OSSL_CMP_PKISI_type(ptr))
#define sk_OSSL_CMP_PKISI_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OSSL_CMP_PKISI_sk_type(sk), ossl_check_OSSL_CMP_PKISI_type(ptr))
#define sk_OSSL_CMP_PKISI_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OSSL_CMP_PKISI_sk_type(sk), ossl_check_OSSL_CMP_PKISI_type(ptr),
pnum)
#define sk_OSSL_CMP_PKISI_sort(sk) OPENSSL_sk_sort(ossl_check_OSSL_CMP_PKISI_sk_type(sk))
#define sk_OSSL_CMP_PKISI_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OSSL_CMP_PKISI_sk_type(sk))
#define sk_OSSL_CMP_PKISI_dup(sk) ((STACK_OF(OSSL_CMP_PKISI)
*)OPENSSL_sk_dup(ossl_check_const_OSSL_CMP_PKISI_sk_type(sk)))
#define sk_OSSL_CMP_PKISI_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OSSL_CMP_PKISI)
*)OPENSSL_sk_deep_copy(ossl_check_const_OSSL_CMP_PKISI_sk_type(sk),
ossl_check_OSSL_CMP_PKISI_copyfunc_type(copyfunc),
ossl_check_OSSL_CMP_PKISI_freefunc_type(freefunc)))
#define sk_OSSL_CMP_PKISI_set_cmp_func(sk, cmp)
((sk_OSSL_CMP_PKISI_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OSSL_CMP_PKISI_sk_type(sk),
ossl_check_OSSL_CMP_PKISI_compfunc_type(cmp)))

typedef struct ossl_cmp_certrepmessage_st OSSL_CMP_CERTREPMESSAGE;
SKM_DEFINE_STACK_OF_INTERNAL(OSSL_CMP_CERTREPMESSAGE,
OSSL_CMP_CERTREPMESSAGE, OSSL_CMP_CERTREPMESSAGE)
#define sk_OSSL_CMP_CERTREPMESSAGE_num(sk)
OPENSSL_sk_num(ossl_check_const_OSSL_CMP_CERTREPMESSAGE_sk_type(sk))
#define sk_OSSL_CMP_CERTREPMESSAGE_value(sk, idx) ((OSSL_CMP_CERTREPMESSAGE
*)OPENSSL_sk_value(ossl_check_const_OSSL_CMP_CERTREPMESSAGE_sk_type(sk), (idx)))
#define sk_OSSL_CMP_CERTREPMESSAGE_new(cmp) ((STACK_OF(OSSL_CMP_CERTREPMESSAGE)
*)OPENSSL_sk_new(ossl_check_OSSL_CMP_CERTREPMESSAGE_compfunc_type(cmp)))

#define sk_OSSL_CMP_CERTREPMESSAGE_new_null() ((STACK_OF(OSSL_CMP_CERTREPMESSAGE)
*)OPENSSL_sk_new_null())
#define sk_OSSL_CMP_CERTREPMESSAGE_new_reserve(cmp,
n) ((STACK_OF(OSSL_CMP_CERTREPMESSAGE)
*)OPENSSL_sk_new_reserve(ossl_check_OSSL_CMP_CERTREPMESSAGE_compfunc_type(cmp), (n)))
#define sk_OSSL_CMP_CERTREPMESSAGE_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk), (n))
#define sk_OSSL_CMP_CERTREPMESSAGE_free(sk)
OPENSSL_sk_free(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk))
#define sk_OSSL_CMP_CERTREPMESSAGE_zero(sk)
OPENSSL_sk_zero(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk))
#define sk_OSSL_CMP_CERTREPMESSAGE_delete(sk, i) ((OSSL_CMP_CERTREPMESSAGE
*)OPENSSL_sk_delete(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk), (i)))
#define sk_OSSL_CMP_CERTREPMESSAGE_delete_ptr(sk, ptr) ((OSSL_CMP_CERTREPMESSAGE
*)OPENSSL_sk_delete_ptr(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),
ossl_check_OSSL_CMP_CERTREPMESSAGE_type(ptr)))
#define sk_OSSL_CMP_CERTREPMESSAGE_push(sk, ptr)
OPENSSL_sk_push(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),
ossl_check_OSSL_CMP_CERTREPMESSAGE_type(ptr))
#define sk_OSSL_CMP_CERTREPMESSAGE_unshift(sk,
ptr) OPENSSL_sk_unshift(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),
ossl_check_OSSL_CMP_CERTREPMESSAGE_type(ptr))
#define sk_OSSL_CMP_CERTREPMESSAGE_pop(sk) ((OSSL_CMP_CERTREPMESSAGE
*)OPENSSL_sk_pop(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk)))
#define sk_OSSL_CMP_CERTREPMESSAGE_shift(sk) ((OSSL_CMP_CERTREPMESSAGE
*)OPENSSL_sk_shift(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk)))
#define sk_OSSL_CMP_CERTREPMESSAGE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),ossl_check_OSSL_CMP_CE
RTREPMESSAGE_freefunc_type(freefunc))
#define sk_OSSL_CMP_CERTREPMESSAGE_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),
ossl_check_OSSL_CMP_CERTREPMESSAGE_type(ptr), (idx))
#define sk_OSSL_CMP_CERTREPMESSAGE_set(sk, idx, ptr) ((OSSL_CMP_CERTREPMESSAGE
*)OPENSSL_sk_set(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk), (idx),
ossl_check_OSSL_CMP_CERTREPMESSAGE_type(ptr)))
#define sk_OSSL_CMP_CERTREPMESSAGE_find(sk,
ptr) OPENSSL_sk_find(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),
ossl_check_OSSL_CMP_CERTREPMESSAGE_type(ptr))
#define sk_OSSL_CMP_CERTREPMESSAGE_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),
ossl_check_OSSL_CMP_CERTREPMESSAGE_type(ptr))
#define sk_OSSL_CMP_CERTREPMESSAGE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),
ossl_check_OSSL_CMP_CERTREPMESSAGE_type(ptr), pnum)
#define sk_OSSL_CMP_CERTREPMESSAGE_sort(sk)
OPENSSL_sk_sort(ossl_check_OSSL_CMP_CERTREPMESSAGE_sk_type(sk))
#define sk_OSSL_CMP_CERTREPMESSAGE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OSSL_CMP_CERTREPMESSAGE_sk_type(sk))

```
#define sk_OSSL_CMP_CERTREPMESSAGE_dup(sk) ((STACK_OF(OSSL_CMP_CERTREPMESSAGE)
*)OPENSSL_sk_dup(ossl_check_const_OSSL_CMP_CERTREPMESSAGE_sk_type(sk)))
#define sk_OSSL_CMP_CERTREPMESSAGE_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(OSSL_CMP_CERTREPMESSAGE)
*)OPENSSL_sk_deep_copy(ossl_check_const_OSSL_CMP_CERTREPMESSAGE_sk_type(sk),
 ossl_check_OSSL_CMP_CERTREPMESSAGE_copyfunc_type(copyfunc),
ossl_check_OSSL_CMP_CERTREPMESSAGE_freefunc_type(freefunc)))
#define sk_OSSL_CMP_CERTREPMESSAGE_set_cmp_func(sk, cmp)
((sk_OSSL_CMP_CERTREPMESSAGE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OSSL_CMP_CERT
REPMESSAGE_sk_type(sk), ossl_check_OSSL_CMP_CERTREPMESSAGE_compfunc_type(cmp)))

typedef struct ossl_cmp_pollrep_st OSSL_CMP_POLLREP;
typedef STACK_OF(OSSL_CMP_POLLREP) OSSL_CMP_POLLREPCONTENT;
typedef struct ossl_cmp_certresponse_st OSSL_CMP_CERTRESPONSE;
SKM_DEFINE_STACK_OF_INTERNAL(OSSL_CMP_CERTRESPONSE, OSSL_CMP_CERTRESPONSE,
OSSL_CMP_CERTRESPONSE)
#define sk_OSSL_CMP_CERTRESPONSE_num(sk)
OPENSSL_sk_num(ossl_check_const_OSSL_CMP_CERTRESPONSE_sk_type(sk))
#define sk_OSSL_CMP_CERTRESPONSE_value(sk, idx) ((OSSL_CMP_CERTRESPONSE
*)OPENSSL_sk_value(ossl_check_const_OSSL_CMP_CERTRESPONSE_sk_type(sk), (idx)))
#define sk_OSSL_CMP_CERTRESPONSE_new(cmp) ((STACK_OF(OSSL_CMP_CERTRESPONSE)
 *)OPENSSL_sk_new(ossl_check_OSSL_CMP_CERTRESPONSE_compfunc_type(cmp)))
#define sk_OSSL_CMP_CERTRESPONSE_new_null() ((STACK_OF(OSSL_CMP_CERTRESPONSE)
*)OPENSSL_sk_new_null())
#define sk_OSSL_CMP_CERTRESPONSE_new_reserve(cmp, n) ((STACK_OF(OSSL_CMP_CERTRESPONSE)
*)OPENSSL_sk_new_reserve(ossl_check_OSSL_CMP_CERTRESPONSE_compfunc_type(cmp), (n)))
#define sk_OSSL_CMP_CERTRESPONSE_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk), (n))
#define sk_OSSL_CMP_CERTRESPONSE_free(sk)
OPENSSL_sk_free(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk))
#define sk_OSSL_CMP_CERTRESPONSE_zero(sk)
OPENSSL_sk_zero(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk))
#define sk_OSSL_CMP_CERTRESPONSE_delete(sk, i) ((OSSL_CMP_CERTRESPONSE
*)OPENSSL_sk_delete(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk), (i)))
#define sk_OSSL_CMP_CERTRESPONSE_delete_ptr(sk, ptr) ((OSSL_CMP_CERTRESPONSE
*)OPENSSL_sk_delete_ptr(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk),
ossl_check_OSSL_CMP_CERTRESPONSE_type(ptr)))
#define
 sk_OSSL_CMP_CERTRESPONSE_push(sk, ptr)
OPENSSL_sk_push(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk),
ossl_check_OSSL_CMP_CERTRESPONSE_type(ptr))
#define sk_OSSL_CMP_CERTRESPONSE_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk),
ossl_check_OSSL_CMP_CERTRESPONSE_type(ptr))
#define sk_OSSL_CMP_CERTRESPONSE_pop(sk) ((OSSL_CMP_CERTRESPONSE
*)OPENSSL_sk_pop(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk)))
#define sk_OSSL_CMP_CERTRESPONSE_shift(sk) ((OSSL_CMP_CERTRESPONSE
*)OPENSSL_sk_shift(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk)))
```

```
#define sk_OSSL_CMP_CERTRESPONSE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk),ossl_check_OSSL_CMP_CERT
RESPONSE_freefunc_type(freefunc))
#define sk_OSSL_CMP_CERTRESPONSE_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk),
ossl_check_OSSL_CMP_CERTRESPONSE_type(ptr), (idx))
#define sk_OSSL_CMP_CERTRESPONSE_set(sk, idx, ptr) ((OSSL_CMP_CERTRESPONSE
 *)OPENSSL_sk_set(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk), (idx),
ossl_check_OSSL_CMP_CERTRESPONSE_type(ptr)))
#define sk_OSSL_CMP_CERTRESPONSE_find(sk, ptr)
OPENSSL_sk_find(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk),
ossl_check_OSSL_CMP_CERTRESPONSE_type(ptr))
#define sk_OSSL_CMP_CERTRESPONSE_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk),
ossl_check_OSSL_CMP_CERTRESPONSE_type(ptr))
#define sk_OSSL_CMP_CERTRESPONSE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk),
ossl_check_OSSL_CMP_CERTRESPONSE_type(ptr), pnum)
#define sk_OSSL_CMP_CERTRESPONSE_sort(sk)
OPENSSL_sk_sort(ossl_check_OSSL_CMP_CERTRESPONSE_sk_type(sk))
#define sk_OSSL_CMP_CERTRESPONSE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OSSL_CMP_CERTRESPONSE_sk_type(sk))
#define sk_OSSL_CMP_CERTRESPONSE_dup(sk) ((STACK_OF(OSSL_CMP_CERTRESPONSE)
*)OPENSSL_sk_dup(ossl_check_const_OSSL_CMP_CERTRESPONSE_sk_type(sk)))
#define sk_OSSL_CMP_CERTRESPONSE_deep_copy(sk,
 copyfunc, freefunc) ((STACK_OF(OSSL_CMP_CERTRESPONSE)
*)OPENSSL_sk_deep_copy(ossl_check_const_OSSL_CMP_CERTRESPONSE_sk_type(sk),
ossl_check_OSSL_CMP_CERTRESPONSE_copyfunc_type(copyfunc),
ossl_check_OSSL_CMP_CERTRESPONSE_freefunc_type(freefunc)))
#define sk_OSSL_CMP_CERTRESPONSE_set_cmp_func(sk, cmp)
((sk_OSSL_CMP_CERTRESPONSE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OSSL_CMP_CERTRE
SPONSE_sk_type(sk), ossl_check_OSSL_CMP_CERTRESPONSE_compfunc_type(cmp)))

typedef STACK_OF(ASN1_UTF8STRING) OSSL_CMP_PKIFREETEXT;

/*
* function DECLARATIONS
*/

/* from cmp_asn.c */
OSSL_CMP_ITAV *OSSL_CMP_ITAV_create(ASN1_OBJECT *type, ASN1_TYPE *value);
void OSSL_CMP_ITAV_set0(OSSL_CMP_ITAV *itav, ASN1_OBJECT *type,
                        ASN1_TYPE *value);
ASN1_OBJECT *OSSL_CMP_ITAV_get0_type(const OSSL_CMP_ITAV *itav);
ASN1_TYPE *OSSL_CMP_ITAV_get0_value(const OSSL_CMP_ITAV *itav);
int OSSL_CMP_ITAV_push0_stack_item(STACK_OF(OSSL_CMP_ITAV) **itav_sk_p,
```

```
                OSSL_CMP_ITAV *itav);
void OSSL_CMP_ITAV_free(OSSL_CMP_ITAV *itav);
void OSSL_CMP_MSG_free(OSSL_CMP_MSG *msg);

/* from cmp_ctx.c */
OSSL_CMP_CTX *OSSL_CMP_CTX_new(OSSL_LIB_CTX *libctx, const char *propq);
void OSSL_CMP_CTX_free(OSSL_CMP_CTX *ctx);
int OSSL_CMP_CTX_reinit(OSSL_CMP_CTX *ctx);
/* CMP general options: */
# define OSSL_CMP_OPT_LOG_VERBOSITY 0
/* CMP transfer options: */
# define OSSL_CMP_OPT_KEEP_ALIVE 10
# define OSSL_CMP_OPT_MSG_TIMEOUT 11
# define OSSL_CMP_OPT_TOTAL_TIMEOUT 12
/* CMP request options: */
# define OSSL_CMP_OPT_VALIDITY_DAYS 20
# define OSSL_CMP_OPT_SUBJECTALTNAME_NODEFAULT 21
# define OSSL_CMP_OPT_SUBJECTALTNAME_CRITICAL 22
# define OSSL_CMP_OPT_POLICIES_CRITICAL 23
# define OSSL_CMP_OPT_POPO_METHOD 24
# define OSSL_CMP_OPT_IMPLICIT_CONFIRM 25
# define OSSL_CMP_OPT_DISABLE_CONFIRM 26
# define OSSL_CMP_OPT_REVOCATION_REASON 27
/* CMP protection options: */
# define OSSL_CMP_OPT_UNPROTECTED_SEND 30
# define OSSL_CMP_OPT_UNPROTECTED_ERRORS
 31
# define OSSL_CMP_OPT_OWF_ALGNID 32
# define OSSL_CMP_OPT_MAC_ALGNID 33
# define OSSL_CMP_OPT_DIGEST_ALGNID 34
# define OSSL_CMP_OPT_IGNORE_KEYUSAGE 35
# define OSSL_CMP_OPT_PERMIT_TA_IN_EXTRACERTS_FOR_IR 36
int OSSL_CMP_CTX_set_option(OSSL_CMP_CTX *ctx, int opt, int val);
int OSSL_CMP_CTX_get_option(const OSSL_CMP_CTX *ctx, int opt);
/* CMP-specific callback for logging and outputting the error queue: */
int OSSL_CMP_CTX_set_log_cb(OSSL_CMP_CTX *ctx, OSSL_CMP_log_cb_t cb);
# define OSSL_CMP_CTX_set_log_verbosity(ctx, level) \
  OSSL_CMP_CTX_set_option(ctx, OSSL_CMP_OPT_LOG_VERBOSITY, level)
void OSSL_CMP_CTX_print_errors(const OSSL_CMP_CTX *ctx);
/* message transfer: */
int OSSL_CMP_CTX_set1_serverPath(OSSL_CMP_CTX *ctx, const char *path);
int OSSL_CMP_CTX_set1_server(OSSL_CMP_CTX *ctx, const char *address);
int OSSL_CMP_CTX_set_serverPort(OSSL_CMP_CTX *ctx, int port);
int OSSL_CMP_CTX_set1_proxy(OSSL_CMP_CTX *ctx, const char *name);
int OSSL_CMP_CTX_set1_no_proxy(OSSL_CMP_CTX
 *ctx, const char *names);
int OSSL_CMP_CTX_set_http_cb(OSSL_CMP_CTX *ctx, OSSL_HTTP_bio_cb_t cb);
int OSSL_CMP_CTX_set_http_cb_arg(OSSL_CMP_CTX *ctx, void *arg);
```

```
void *OSSL_CMP_CTX_get_http_cb_arg(const OSSL_CMP_CTX *ctx);
typedef OSSL_CMP_MSG *(*OSSL_CMP_transfer_cb_t) (OSSL_CMP_CTX *ctx,
                                const OSSL_CMP_MSG *req);
int OSSL_CMP_CTX_set_transfer_cb(OSSL_CMP_CTX *ctx, OSSL_CMP_transfer_cb_t cb);
int OSSL_CMP_CTX_set_transfer_cb_arg(OSSL_CMP_CTX *ctx, void *arg);
void *OSSL_CMP_CTX_get_transfer_cb_arg(const OSSL_CMP_CTX *ctx);
/* server authentication: */
int OSSL_CMP_CTX_set1_srvCert(OSSL_CMP_CTX *ctx, X509 *cert);
int OSSL_CMP_CTX_set1_expected_sender(OSSL_CMP_CTX *ctx, const X509_NAME *name);
int OSSL_CMP_CTX_set0_trustedStore(OSSL_CMP_CTX *ctx, X509_STORE *store);
X509_STORE *OSSL_CMP_CTX_get0_trustedStore(const OSSL_CMP_CTX *ctx);
int OSSL_CMP_CTX_set1_untrusted(OSSL_CMP_CTX *ctx, STACK_OF(X509) *certs);
STACK_OF(X509)
 *OSSL_CMP_CTX_get0_untrusted(const OSSL_CMP_CTX *ctx);
/* client authentication: */
int OSSL_CMP_CTX_set1_cert(OSSL_CMP_CTX *ctx, X509 *cert);
int OSSL_CMP_CTX_build_cert_chain(OSSL_CMP_CTX *ctx, X509_STORE *own_trusted,
                        STACK_OF(X509) *candidates);
int OSSL_CMP_CTX_set1_pkey(OSSL_CMP_CTX *ctx, EVP_PKEY *pkey);
int OSSL_CMP_CTX_set1_referenceValue(OSSL_CMP_CTX *ctx,
                         const unsigned char *ref, int len);
int OSSL_CMP_CTX_set1_secretValue(OSSL_CMP_CTX *ctx,
                        const unsigned char *sec, int len);
/* CMP message header and extra certificates: */
int OSSL_CMP_CTX_set1_recipient(OSSL_CMP_CTX *ctx, const X509_NAME *name);
int OSSL_CMP_CTX_push0_geninfo_ITAV(OSSL_CMP_CTX *ctx, OSSL_CMP_ITAV *itav);
int OSSL_CMP_CTX_reset_geninfo_ITAVs(OSSL_CMP_CTX *ctx);
int OSSL_CMP_CTX_set1_extraCertsOut(OSSL_CMP_CTX *ctx,
                         STACK_OF(X509) *extraCertsOut);
/* certificate template:
 */
int OSSL_CMP_CTX_set0_newPkey(OSSL_CMP_CTX *ctx, int priv, EVP_PKEY *pkey);
EVP_PKEY *OSSL_CMP_CTX_get0_newPkey(const OSSL_CMP_CTX *ctx, int priv);
int OSSL_CMP_CTX_set1_issuer(OSSL_CMP_CTX *ctx, const X509_NAME *name);
int OSSL_CMP_CTX_set1_subjectName(OSSL_CMP_CTX *ctx, const X509_NAME *name);
int OSSL_CMP_CTX_push1_subjectAltName(OSSL_CMP_CTX *ctx,
                          const GENERAL_NAME *name);
int OSSL_CMP_CTX_set0_reqExtensions(OSSL_CMP_CTX *ctx, X509_EXTENSIONS *exts);
int OSSL_CMP_CTX_reqExtensions_have_SAN(OSSL_CMP_CTX *ctx);
int OSSL_CMP_CTX_push0_policy(OSSL_CMP_CTX *ctx, POLICYINFO *pinfo);
int OSSL_CMP_CTX_set1_oldCert(OSSL_CMP_CTX *ctx, X509 *cert);
int OSSL_CMP_CTX_set1_p10CSR(OSSL_CMP_CTX *ctx, const X509_REQ *csr);
/* misc body contents: */
int OSSL_CMP_CTX_push0_genm_ITAV(OSSL_CMP_CTX *ctx, OSSL_CMP_ITAV *itav);
/* certificate confirmation: */
typedef int (*OSSL_CMP_certConf_cb_t) (OSSL_CMP_CTX *ctx, X509 *cert,
```

```
        int fail_info, const char **txt);
int OSSL_CMP_certConf_cb(OSSL_CMP_CTX *ctx, X509 *cert, int fail_info,
                         const char **text);
int OSSL_CMP_CTX_set_certConf_cb(OSSL_CMP_CTX *ctx, OSSL_CMP_certConf_cb_t cb);
int OSSL_CMP_CTX_set_certConf_cb_arg(OSSL_CMP_CTX *ctx, void *arg);
void *OSSL_CMP_CTX_get_certConf_cb_arg(const OSSL_CMP_CTX *ctx);
/* result fetching: */
int OSSL_CMP_CTX_get_status(const OSSL_CMP_CTX *ctx);
OSSL_CMP_PKIFREETEXT *OSSL_CMP_CTX_get0_statusString(const OSSL_CMP_CTX *ctx);
int OSSL_CMP_CTX_get_failInfoCode(const OSSL_CMP_CTX *ctx);
#  define OSSL_CMP_PKISI_BUFLEN 1024
X509 *OSSL_CMP_CTX_get0_newCert(const OSSL_CMP_CTX *ctx);
STACK_OF(X509) *OSSL_CMP_CTX_get1_newChain(const OSSL_CMP_CTX *ctx);
STACK_OF(X509) *OSSL_CMP_CTX_get1_caPubs(const OSSL_CMP_CTX *ctx);
STACK_OF(X509) *OSSL_CMP_CTX_get1_extraCertsIn(const OSSL_CMP_CTX *ctx);
int OSSL_CMP_CTX_set1_transactionID(OSSL_CMP_CTX *ctx,
                                    const ASN1_OCTET_STRING
 *id);
int OSSL_CMP_CTX_set1_senderNonce(OSSL_CMP_CTX *ctx,
                                  const ASN1_OCTET_STRING *nonce);

/* from cmp_status.c */
char *OSSL_CMP_CTX_snprint_PKIStatus(const OSSL_CMP_CTX *ctx, char *buf,
                                     size_t bufsize);
char *OSSL_CMP_snprint_PKIStatusInfo(const OSSL_CMP_PKISI *statusInfo,
                                     char *buf, size_t bufsize);
OSSL_CMP_PKISI *
OSSL_CMP_STATUSINFO_new(int status, int fail_info, const char *text);

/* from cmp_hdr.c */
ASN1_OCTET_STRING *OSSL_CMP_HDR_get0_transactionID(const
                                                   OSSL_CMP_PKIHEADER *hdr);
ASN1_OCTET_STRING *OSSL_CMP_HDR_get0_recipNonce(const OSSL_CMP_PKIHEADER *hdr);

/* from cmp_msg.c */
OSSL_CMP_PKIHEADER *OSSL_CMP_MSG_get0_header(const OSSL_CMP_MSG *msg);
int OSSL_CMP_MSG_get_bodytype(const OSSL_CMP_MSG *msg);
int OSSL_CMP_MSG_update_transactionID(OSSL_CMP_CTX *ctx, OSSL_CMP_MSG *msg);
int OSSL_CMP_MSG_update_recipNonce(OSSL_CMP_CTX
 *ctx, OSSL_CMP_MSG *msg);
OSSL_CRMF_MSG *OSSL_CMP_CTX_setup_CRM(OSSL_CMP_CTX *ctx, int for_KUR, int rid);
OSSL_CMP_MSG *OSSL_CMP_MSG_read(const char *file, OSSL_LIB_CTX *libctx,
                                const char *propq);
int OSSL_CMP_MSG_write(const char *file, const OSSL_CMP_MSG *msg);
OSSL_CMP_MSG *d2i_OSSL_CMP_MSG_bio(BIO *bio, OSSL_CMP_MSG **msg);
int i2d_OSSL_CMP_MSG_bio(BIO *bio, const OSSL_CMP_MSG *msg);

/* from cmp_vfy.c */
```

```
int OSSL_CMP_validate_msg(OSSL_CMP_CTX *ctx, const OSSL_CMP_MSG *msg);
int OSSL_CMP_validate_cert_path(const OSSL_CMP_CTX *ctx,
                                X509_STORE *trusted_store, X509 *cert);

/* from cmp_http.c */
OSSL_CMP_MSG *OSSL_CMP_MSG_http_perform(OSSL_CMP_CTX *ctx,
                                        const OSSL_CMP_MSG *req);

/* from cmp_server.c */
typedef struct ossl_cmp_srv_ctx_st OSSL_CMP_SRV_CTX;
OSSL_CMP_MSG *OSSL_CMP_SRV_process_request(OSSL_CMP_SRV_CTX *srv_ctx,

   const OSSL_CMP_MSG *req);
OSSL_CMP_MSG * OSSL_CMP_CTX_server_perform(OSSL_CMP_CTX *client_ctx,
                                           const OSSL_CMP_MSG *req);
OSSL_CMP_SRV_CTX *OSSL_CMP_SRV_CTX_new(OSSL_LIB_CTX *libctx, const char *propq);
void OSSL_CMP_SRV_CTX_free(OSSL_CMP_SRV_CTX *srv_ctx);
typedef OSSL_CMP_PKISI *(*OSSL_CMP_SRV_cert_request_cb_t)
  (OSSL_CMP_SRV_CTX *srv_ctx, const OSSL_CMP_MSG *req, int certReqId,
   const OSSL_CRMF_MSG *crm, const X509_REQ *p10cr,
   X509 **certOut, STACK_OF(X509) **chainOut, STACK_OF(X509) **caPubs);
typedef OSSL_CMP_PKISI *(*OSSL_CMP_SRV_rr_cb_t)(OSSL_CMP_SRV_CTX *srv_ctx,
                                                const OSSL_CMP_MSG *req,
                                                const X509_NAME *issuer,
                                                const ASN1_INTEGER *serial);
typedef int (*OSSL_CMP_SRV_genm_cb_t)(OSSL_CMP_SRV_CTX *srv_ctx,
                                      const OSSL_CMP_MSG *req,

                    const STACK_OF(OSSL_CMP_ITAV) *in,
                                      STACK_OF(OSSL_CMP_ITAV) **out);
typedef void (*OSSL_CMP_SRV_error_cb_t)(OSSL_CMP_SRV_CTX *srv_ctx,
                                        const OSSL_CMP_MSG *req,
                                        const OSSL_CMP_PKISI *statusInfo,
                                        const ASN1_INTEGER *errorCode,
                                        const OSSL_CMP_PKIFREETEXT *errDetails);
typedef int (*OSSL_CMP_SRV_certConf_cb_t)(OSSL_CMP_SRV_CTX *srv_ctx,
                                          const OSSL_CMP_MSG *req,
                                          int certReqId,
                                          const ASN1_OCTET_STRING *certHash,
                                          const OSSL_CMP_PKISI *si);
typedef int (*OSSL_CMP_SRV_pollReq_cb_t)(OSSL_CMP_SRV_CTX *srv_ctx,
                                         const OSSL_CMP_MSG *req, int certReqId,

            OSSL_CMP_MSG **certReq,
                                         int64_t *check_after);
int OSSL_CMP_SRV_CTX_init(OSSL_CMP_SRV_CTX *srv_ctx, void *custom_ctx,
                  OSSL_CMP_SRV_cert_request_cb_t process_cert_request,
                  OSSL_CMP_SRV_rr_cb_t process_rr,
```

```
                    OSSL_CMP_SRV_genm_cb_t process_genm,
                    OSSL_CMP_SRV_error_cb_t process_error,
                    OSSL_CMP_SRV_certConf_cb_t process_certConf,
                    OSSL_CMP_SRV_pollReq_cb_t process_pollReq);
OSSL_CMP_CTX *OSSL_CMP_SRV_CTX_get0_cmp_ctx(const OSSL_CMP_SRV_CTX *srv_ctx);
void *OSSL_CMP_SRV_CTX_get0_custom_ctx(const OSSL_CMP_SRV_CTX *srv_ctx);
int OSSL_CMP_SRV_CTX_set_send_unprotected_errors(OSSL_CMP_SRV_CTX *srv_ctx,
                                  int val);
int OSSL_CMP_SRV_CTX_set_accept_unprotected(OSSL_CMP_SRV_CTX *srv_ctx, int val);
int OSSL_CMP_SRV_CTX_set_accept_raverified(OSSL_CMP_SRV_CTX
 *srv_ctx, int val);
int OSSL_CMP_SRV_CTX_set_grant_implicit_confirm(OSSL_CMP_SRV_CTX *srv_ctx,
                                  int val);

/* from cmp_client.c */
X509 *OSSL_CMP_exec_certreq(OSSL_CMP_CTX *ctx, int req_type,
                    const OSSL_CRMF_MSG *crm);
#  define OSSL_CMP_IR    0
#  define OSSL_CMP_CR    2
#  define OSSL_CMP_P10CR 4
#  define OSSL_CMP_KUR   7
#  define OSSL_CMP_exec_IR_ses(ctx) \
   OSSL_CMP_exec_certreq(ctx, OSSL_CMP_IR, NULL)
#  define OSSL_CMP_exec_CR_ses(ctx) \
   OSSL_CMP_exec_certreq(ctx, OSSL_CMP_CR, NULL)
#  define OSSL_CMP_exec_P10CR_ses(ctx) \
   OSSL_CMP_exec_certreq(ctx, OSSL_CMP_P10CR, NULL)
#  define OSSL_CMP_exec_KUR_ses(ctx) \
   OSSL_CMP_exec_certreq(ctx, OSSL_CMP_KUR, NULL)
int OSSL_CMP_try_certreq(OSSL_CMP_CTX *ctx, int req_type,
                   const OSSL_CRMF_MSG *crm, int *checkAfter);
int OSSL_CMP_exec_RR_ses(OSSL_CMP_CTX *ctx);
STACK_OF(OSSL_CMP_ITAV) *OSSL_CMP_exec_GENM_ses(OSSL_CMP_CTX
 *ctx);

#  ifdef  __cplusplus
}
#  endif
# endif /* !defined(OPENSSL_NO_CMP) */
#endif /* !defined(OPENSSL_CMP_H) */
```

Copyright (C) 1993-2004 by Sun Microsystems, Inc. All rights reserved.

Developed at SunSoft, a Sun Microsystems, Inc. business.
Permission to use, copy, modify, and distribute this
software is freely granted, provided that this notice
is preserved.

```
/* WARNING: do not edit! */
/* Generated by Makefile from include/crypto/dso_conf.h.in */
```

```
/*
* Copyright 2016-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#ifndef OSSL_CRYPTO_DSO_CONF_H
# define OSSL_CRYPTO_DSO_CONF_H
# pragma once

# define DSO_DLFCN
# define HAVE_DLFCN_H
# define DSO_EXTENSION ".so"
#endif
```

UNRECOGNIZED LICENSE; MD5 sum: 5f6b5d3d7fba7daf8d8a8c827c8758a8

All packages under `src/` are licensed according to the terms in
their respective `LICENSE` or `LICENSE.md` files.

The remainder of this project is licensed under the Blue Oak
Model License, as follows:

Blue Oak Model License

Version 1.0.0

Purpose

This license gives everyone as much permission to work with
this software as possible, while protecting contributors
from liability.

Acceptance

In order to receive this license, you must agree to its
rules. The rules of this license are both obligations
under that agreement and conditions to your license.
You must not do anything with this software that triggers
a rule that you cannot or will not follow.

Copyright

Each contributor licenses you to do everything with this
software that would otherwise infringe that contributor's

copyright in it.

Notices

You must ensure that everyone who gets a copy of
any part of this software from you, with or without
changes, also gets the text of this license or a link to
<https://blueoakcouncil.org/license/1.0.0>.

##
Excuse

If anyone notifies you in writing that you have not
complied with [Notices](#notices), you can keep your
license by taking all practical steps to comply within 30
days after the notice. If you do not do so, your license
ends immediately.

Patent

Each contributor licenses you to do everything with this
software that would otherwise infringe any patent claims
they can license or become able to license.

Reliability

No contributor can revoke this license.

No Liability

***As far as the law allows, this software comes as is,
without any warranty or condition, and no contributor
will be liable to anyone for any damages related to this
software or this license, under any kind of legal claim.***
The ISC License

Copyright npm, Inc

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR

IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
BSD License

For Zstandard software

Copyright (c) Meta Platforms, Inc. and affiliates. All rights reserved.

Redistribution and use in source and binary forms, with or without modification,
are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this
  list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice,
  this list of conditions and the following disclaimer in the documentation
  and/or other materials provided with the distribution.

* Neither the name Facebook, nor Meta, nor the names of its contributors may
  be used to endorse or promote products derived from this software without
  specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
 PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
MIT License

Copyright (c) 2020 Kasper Unn Weihe

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,

FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
MIT License

Copyright (c) Sindre Sorhus <sindresorhus@gmail.com> (https://sindresorhus.com)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT
OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
UNRECOGNIZED LICENSE; MD5 sum: d419584b39f2ab862fb4d190c76d4a2f
MIT License

Copyright (c) Matteo Collina and Undici contributors

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Creative Commons CC0
BSD-3-Clause

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/x509_vfy.h.in
*
* Copyright 1995-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_X509_VFY_H
# define OPENSSL_X509_VFY_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_X509_VFY_H
# endif

/*
* Protect against recursion, x509.h and x509_vfy.h each include the other.
*/
# ifndef OPENSSL_X509_H
#  include <openssl/x509.h>
# endif

# include <openssl/opensslconf.h>
# include <openssl/lhash.h>
# include <openssl/bio.h>
# include <openssl/crypto.h>
# include <openssl/symhacks.h>

#ifdef  __cplusplus
extern "C" {
#endif

/*-
SSL_CTX -> X509_STORE
            -> X509_LOOKUP

           ->X509_LOOKUP_METHOD
            -> X509_LOOKUP
```

```
                ->X509_LOOKUP_METHOD

SSL     -> X509_STORE_CTX
             ->X509_STORE

The X509_STORE holds the tables etc for verification stuff.
A X509_STORE_CTX is used while validating a single certificate.
The X509_STORE has X509_LOOKUPs for looking up certs.
The X509_STORE then calls a function to actually verify the
certificate chain.
*/

typedef enum {
  X509_LU_NONE = 0,
  X509_LU_X509, X509_LU_CRL
} X509_LOOKUP_TYPE;

#ifndef OPENSSL_NO_DEPRECATED_1_1_0
#define X509_LU_RETRY   -1
#define X509_LU_FAIL    0
#endif

SKM_DEFINE_STACK_OF_INTERNAL(X509_LOOKUP, X509_LOOKUP, X509_LOOKUP)
#define sk_X509_LOOKUP_num(sk) OPENSSL_sk_num(ossl_check_const_X509_LOOKUP_sk_type(sk))
#define sk_X509_LOOKUP_value(sk, idx) ((X509_LOOKUP
*)OPENSSL_sk_value(ossl_check_const_X509_LOOKUP_sk_type(sk), (idx)))
#define sk_X509_LOOKUP_new(cmp) ((STACK_OF(X509_LOOKUP)
*)OPENSSL_sk_new(ossl_check_X509_LOOKUP_compfunc_type(cmp)))
#define
 sk_X509_LOOKUP_new_null() ((STACK_OF(X509_LOOKUP) *)OPENSSL_sk_new_null())
#define sk_X509_LOOKUP_new_reserve(cmp, n) ((STACK_OF(X509_LOOKUP)
*)OPENSSL_sk_new_reserve(ossl_check_X509_LOOKUP_compfunc_type(cmp), (n)))
#define sk_X509_LOOKUP_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_LOOKUP_sk_type(sk), (n))
#define sk_X509_LOOKUP_free(sk) OPENSSL_sk_free(ossl_check_X509_LOOKUP_sk_type(sk))
#define sk_X509_LOOKUP_zero(sk) OPENSSL_sk_zero(ossl_check_X509_LOOKUP_sk_type(sk))
#define sk_X509_LOOKUP_delete(sk, i) ((X509_LOOKUP
*)OPENSSL_sk_delete(ossl_check_X509_LOOKUP_sk_type(sk), (i)))
#define sk_X509_LOOKUP_delete_ptr(sk, ptr) ((X509_LOOKUP
*)OPENSSL_sk_delete_ptr(ossl_check_X509_LOOKUP_sk_type(sk), ossl_check_X509_LOOKUP_type(ptr)))
#define sk_X509_LOOKUP_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_LOOKUP_sk_type(sk),
ossl_check_X509_LOOKUP_type(ptr))
#define sk_X509_LOOKUP_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_LOOKUP_sk_type(sk),
ossl_check_X509_LOOKUP_type(ptr))
#define
 sk_X509_LOOKUP_pop(sk) ((X509_LOOKUP *)OPENSSL_sk_pop(ossl_check_X509_LOOKUP_sk_type(sk)))
#define sk_X509_LOOKUP_shift(sk) ((X509_LOOKUP
*)OPENSSL_sk_shift(ossl_check_X509_LOOKUP_sk_type(sk)))
#define sk_X509_LOOKUP_pop_free(sk, freefunc)
```

OPENSSL_sk_pop_free(ossl_check_X509_LOOKUP_sk_type(sk),ossl_check_X509_LOOKUP_freefunc_type(free
func))
#define sk_X509_LOOKUP_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_LOOKUP_sk_type(sk),
ossl_check_X509_LOOKUP_type(ptr), (idx))
#define sk_X509_LOOKUP_set(sk, idx, ptr) ((X509_LOOKUP
*)OPENSSL_sk_set(ossl_check_X509_LOOKUP_sk_type(sk), (idx), ossl_check_X509_LOOKUP_type(ptr)))
#define sk_X509_LOOKUP_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_LOOKUP_sk_type(sk),
ossl_check_X509_LOOKUP_type(ptr))
#define sk_X509_LOOKUP_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_LOOKUP_sk_type(sk),
ossl_check_X509_LOOKUP_type(ptr))
#define sk_X509_LOOKUP_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_LOOKUP_sk_type(sk),
ossl_check_X509_LOOKUP_type(ptr), pnum)
#define sk_X509_LOOKUP_sort(sk) OPENSSL_sk_sort(ossl_check_X509_LOOKUP_sk_type(sk))
#define sk_X509_LOOKUP_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509_LOOKUP_sk_type(sk))
#define sk_X509_LOOKUP_dup(sk) ((STACK_OF(X509_LOOKUP)
*)OPENSSL_sk_dup(ossl_check_const_X509_LOOKUP_sk_type(sk)))
#define sk_X509_LOOKUP_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_LOOKUP)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_LOOKUP_sk_type(sk),
ossl_check_X509_LOOKUP_copyfunc_type(copyfunc), ossl_check_X509_LOOKUP_freefunc_type(freefunc)))
#define sk_X509_LOOKUP_set_cmp_func(sk, cmp)
((sk_X509_LOOKUP_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_LOOKUP_sk_type(sk),
ossl_check_X509_LOOKUP_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(X509_OBJECT, X509_OBJECT, X509_OBJECT)
#define sk_X509_OBJECT_num(sk) OPENSSL_sk_num(ossl_check_const_X509_OBJECT_sk_type(sk))
#define sk_X509_OBJECT_value(sk, idx) ((X509_OBJECT
*)OPENSSL_sk_value(ossl_check_const_X509_OBJECT_sk_type(sk),
(idx)))
#define sk_X509_OBJECT_new(cmp) ((STACK_OF(X509_OBJECT)
*)OPENSSL_sk_new(ossl_check_X509_OBJECT_compfunc_type(cmp)))
#define sk_X509_OBJECT_new_null() ((STACK_OF(X509_OBJECT) *)OPENSSL_sk_new_null())
#define sk_X509_OBJECT_new_reserve(cmp, n) ((STACK_OF(X509_OBJECT)
*)OPENSSL_sk_new_reserve(ossl_check_X509_OBJECT_compfunc_type(cmp), (n)))
#define sk_X509_OBJECT_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_OBJECT_sk_type(sk), (n))
#define sk_X509_OBJECT_free(sk) OPENSSL_sk_free(ossl_check_X509_OBJECT_sk_type(sk))
#define sk_X509_OBJECT_zero(sk) OPENSSL_sk_zero(ossl_check_X509_OBJECT_sk_type(sk))
#define sk_X509_OBJECT_delete(sk, i) ((X509_OBJECT
*)OPENSSL_sk_delete(ossl_check_X509_OBJECT_sk_type(sk), (i)))
#define sk_X509_OBJECT_delete_ptr(sk, ptr) ((X509_OBJECT
*)OPENSSL_sk_delete_ptr(ossl_check_X509_OBJECT_sk_type(sk), ossl_check_X509_OBJECT_type(ptr)))
#define sk_X509_OBJECT_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_OBJECT_sk_type(sk),
ossl_check_X509_OBJECT_type(ptr))
#define sk_X509_OBJECT_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_OBJECT_sk_type(sk),
ossl_check_X509_OBJECT_type(ptr))
#define sk_X509_OBJECT_pop(sk) ((X509_OBJECT
*)OPENSSL_sk_pop(ossl_check_X509_OBJECT_sk_type(sk)))
#define sk_X509_OBJECT_shift(sk) ((X509_OBJECT

*)OPENSSL_sk_shift(ossl_check_X509_OBJECT_sk_type(sk)))
#define sk_X509_OBJECT_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_OBJECT_sk_type(sk),ossl_check_X509_OBJECT_freefunc_type(freef
unc))
#define sk_X509_OBJECT_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_OBJECT_sk_type(sk),
ossl_check_X509_OBJECT_type(ptr), (idx))
#define sk_X509_OBJECT_set(sk, idx, ptr) ((X509_OBJECT
*)OPENSSL_sk_set(ossl_check_X509_OBJECT_sk_type(sk), (idx), ossl_check_X509_OBJECT_type(ptr)))
#define sk_X509_OBJECT_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_OBJECT_sk_type(sk),
ossl_check_X509_OBJECT_type(ptr))
#define sk_X509_OBJECT_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_OBJECT_sk_type(sk),
ossl_check_X509_OBJECT_type(ptr))
#define sk_X509_OBJECT_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_OBJECT_sk_type(sk), ossl_check_X509_OBJECT_type(ptr), pnum)
#define sk_X509_OBJECT_sort(sk) OPENSSL_sk_sort(ossl_check_X509_OBJECT_sk_type(sk))
#define sk_X509_OBJECT_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_X509_OBJECT_sk_type(sk))
#define sk_X509_OBJECT_dup(sk) ((STACK_OF(X509_OBJECT)
*)OPENSSL_sk_dup(ossl_check_const_X509_OBJECT_sk_type(sk)))
#define sk_X509_OBJECT_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_OBJECT)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_OBJECT_sk_type(sk),
ossl_check_X509_OBJECT_copyfunc_type(copyfunc), ossl_check_X509_OBJECT_freefunc_type(freefunc)))
#define sk_X509_OBJECT_set_cmp_func(sk, cmp)
((sk_X509_OBJECT_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_OBJECT_sk_type(sk),
ossl_check_X509_OBJECT_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(X509_VERIFY_PARAM, X509_VERIFY_PARAM,
X509_VERIFY_PARAM)
#define
sk_X509_VERIFY_PARAM_num(sk)
OPENSSL_sk_num(ossl_check_const_X509_VERIFY_PARAM_sk_type(sk))
#define sk_X509_VERIFY_PARAM_value(sk, idx) ((X509_VERIFY_PARAM
*)OPENSSL_sk_value(ossl_check_const_X509_VERIFY_PARAM_sk_type(sk), (idx)))
#define sk_X509_VERIFY_PARAM_new(cmp) ((STACK_OF(X509_VERIFY_PARAM)
*)OPENSSL_sk_new(ossl_check_X509_VERIFY_PARAM_compfunc_type(cmp)))
#define sk_X509_VERIFY_PARAM_new_null() ((STACK_OF(X509_VERIFY_PARAM)
*)OPENSSL_sk_new_null())
#define sk_X509_VERIFY_PARAM_new_reserve(cmp, n) ((STACK_OF(X509_VERIFY_PARAM)
*)OPENSSL_sk_new_reserve(ossl_check_X509_VERIFY_PARAM_compfunc_type(cmp), (n)))
#define sk_X509_VERIFY_PARAM_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_X509_VERIFY_PARAM_sk_type(sk), (n))
#define sk_X509_VERIFY_PARAM_free(sk)
OPENSSL_sk_free(ossl_check_X509_VERIFY_PARAM_sk_type(sk))
#define sk_X509_VERIFY_PARAM_zero(sk)
OPENSSL_sk_zero(ossl_check_X509_VERIFY_PARAM_sk_type(sk))
#define sk_X509_VERIFY_PARAM_delete(sk, i) ((X509_VERIFY_PARAM
*)OPENSSL_sk_delete(ossl_check_X509_VERIFY_PARAM_sk_type(sk),
(i)))
#define sk_X509_VERIFY_PARAM_delete_ptr(sk, ptr) ((X509_VERIFY_PARAM
*)OPENSSL_sk_delete_ptr(ossl_check_X509_VERIFY_PARAM_sk_type(sk),

```
ossl_check_X509_VERIFY_PARAM_type(ptr)))
#define sk_X509_VERIFY_PARAM_push(sk, ptr)
OPENSSL_sk_push(ossl_check_X509_VERIFY_PARAM_sk_type(sk),
ossl_check_X509_VERIFY_PARAM_type(ptr))
#define sk_X509_VERIFY_PARAM_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_X509_VERIFY_PARAM_sk_type(sk),
ossl_check_X509_VERIFY_PARAM_type(ptr))
#define sk_X509_VERIFY_PARAM_pop(sk) ((X509_VERIFY_PARAM
*)OPENSSL_sk_pop(ossl_check_X509_VERIFY_PARAM_sk_type(sk)))
#define sk_X509_VERIFY_PARAM_shift(sk) ((X509_VERIFY_PARAM
*)OPENSSL_sk_shift(ossl_check_X509_VERIFY_PARAM_sk_type(sk)))
#define sk_X509_VERIFY_PARAM_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_VERIFY_PARAM_sk_type(sk),ossl_check_X509_VERIFY_PARAM_
freefunc_type(freefunc))
#define sk_X509_VERIFY_PARAM_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_X509_VERIFY_PARAM_sk_type(sk),
 ossl_check_X509_VERIFY_PARAM_type(ptr), (idx))
#define sk_X509_VERIFY_PARAM_set(sk, idx, ptr) ((X509_VERIFY_PARAM
*)OPENSSL_sk_set(ossl_check_X509_VERIFY_PARAM_sk_type(sk), (idx),
ossl_check_X509_VERIFY_PARAM_type(ptr)))
#define sk_X509_VERIFY_PARAM_find(sk, ptr)
OPENSSL_sk_find(ossl_check_X509_VERIFY_PARAM_sk_type(sk),
ossl_check_X509_VERIFY_PARAM_type(ptr))
#define sk_X509_VERIFY_PARAM_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_X509_VERIFY_PARAM_sk_type(sk),
ossl_check_X509_VERIFY_PARAM_type(ptr))
#define sk_X509_VERIFY_PARAM_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_VERIFY_PARAM_sk_type(sk),
ossl_check_X509_VERIFY_PARAM_type(ptr), pnum)
#define sk_X509_VERIFY_PARAM_sort(sk)
OPENSSL_sk_sort(ossl_check_X509_VERIFY_PARAM_sk_type(sk))
#define sk_X509_VERIFY_PARAM_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509_VERIFY_PARAM_sk_type(sk))
#define sk_X509_VERIFY_PARAM_dup(sk) ((STACK_OF(X509_VERIFY_PARAM)
*)OPENSSL_sk_dup(ossl_check_const_X509_VERIFY_PARAM_sk_type(sk)))
#define
 sk_X509_VERIFY_PARAM_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_VERIFY_PARAM)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_VERIFY_PARAM_sk_type(sk),
ossl_check_X509_VERIFY_PARAM_copyfunc_type(copyfunc),
ossl_check_X509_VERIFY_PARAM_freefunc_type(freefunc)))
#define sk_X509_VERIFY_PARAM_set_cmp_func(sk, cmp)
((sk_X509_VERIFY_PARAM_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_VERIFY_PARAM_sk_
type(sk), ossl_check_X509_VERIFY_PARAM_compfunc_type(cmp)))


/* This is used for a table of trust checking functions */
typedef struct x509_trust_st {
  int trust;
```

```
  int flags;
  int (*check_trust) (struct x509_trust_st *, X509 *, int);
  char *name;
  int arg1;
  void *arg2;
} X509_TRUST;
SKM_DEFINE_STACK_OF_INTERNAL(X509_TRUST, X509_TRUST, X509_TRUST)
#define sk_X509_TRUST_num(sk) OPENSSL_sk_num(ossl_check_const_X509_TRUST_sk_type(sk))
#define sk_X509_TRUST_value(sk, idx) ((X509_TRUST
*)OPENSSL_sk_value(ossl_check_const_X509_TRUST_sk_type(sk),
 (idx)))
#define sk_X509_TRUST_new(cmp) ((STACK_OF(X509_TRUST)
*)OPENSSL_sk_new(ossl_check_X509_TRUST_compfunc_type(cmp)))
#define sk_X509_TRUST_new_null() ((STACK_OF(X509_TRUST) *)OPENSSL_sk_new_null())
#define sk_X509_TRUST_new_reserve(cmp, n) ((STACK_OF(X509_TRUST)
*)OPENSSL_sk_new_reserve(ossl_check_X509_TRUST_compfunc_type(cmp), (n)))
#define sk_X509_TRUST_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_TRUST_sk_type(sk), (n))
#define sk_X509_TRUST_free(sk) OPENSSL_sk_free(ossl_check_X509_TRUST_sk_type(sk))
#define sk_X509_TRUST_zero(sk) OPENSSL_sk_zero(ossl_check_X509_TRUST_sk_type(sk))
#define sk_X509_TRUST_delete(sk, i) ((X509_TRUST
*)OPENSSL_sk_delete(ossl_check_X509_TRUST_sk_type(sk), (i)))
#define sk_X509_TRUST_delete_ptr(sk, ptr) ((X509_TRUST
*)OPENSSL_sk_delete_ptr(ossl_check_X509_TRUST_sk_type(sk), ossl_check_X509_TRUST_type(ptr)))
#define sk_X509_TRUST_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_TRUST_sk_type(sk),
ossl_check_X509_TRUST_type(ptr))
#define
 sk_X509_TRUST_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_TRUST_sk_type(sk),
ossl_check_X509_TRUST_type(ptr))
#define sk_X509_TRUST_pop(sk) ((X509_TRUST *)OPENSSL_sk_pop(ossl_check_X509_TRUST_sk_type(sk)))
#define sk_X509_TRUST_shift(sk) ((X509_TRUST
*)OPENSSL_sk_shift(ossl_check_X509_TRUST_sk_type(sk)))
#define sk_X509_TRUST_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_TRUST_sk_type(sk),ossl_check_X509_TRUST_freefunc_type(freefunc
))
#define sk_X509_TRUST_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_TRUST_sk_type(sk),
ossl_check_X509_TRUST_type(ptr), (idx))
#define sk_X509_TRUST_set(sk, idx, ptr) ((X509_TRUST
*)OPENSSL_sk_set(ossl_check_X509_TRUST_sk_type(sk), (idx), ossl_check_X509_TRUST_type(ptr)))
#define sk_X509_TRUST_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_TRUST_sk_type(sk),
ossl_check_X509_TRUST_type(ptr))
#define sk_X509_TRUST_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_TRUST_sk_type(sk),
ossl_check_X509_TRUST_type(ptr))
#define
 sk_X509_TRUST_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_X509_TRUST_sk_type(sk),
ossl_check_X509_TRUST_type(ptr), pnum)
#define sk_X509_TRUST_sort(sk) OPENSSL_sk_sort(ossl_check_X509_TRUST_sk_type(sk))
#define sk_X509_TRUST_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_X509_TRUST_sk_type(sk))
#define sk_X509_TRUST_dup(sk) ((STACK_OF(X509_TRUST)
```

```
*)OPENSSL_sk_dup(ossl_check_const_X509_TRUST_sk_type(sk)))
#define sk_X509_TRUST_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_TRUST)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_TRUST_sk_type(sk),
ossl_check_X509_TRUST_copyfunc_type(copyfunc), ossl_check_X509_TRUST_freefunc_type(freefunc)))
#define sk_X509_TRUST_set_cmp_func(sk, cmp)
((sk_X509_TRUST_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_TRUST_sk_type(sk),
ossl_check_X509_TRUST_compfunc_type(cmp)))


/* standard trust ids */
# define X509_TRUST_DEFAULT      0 /* Only valid in purpose settings */
# define X509_TRUST_COMPAT       1
# define X509_TRUST_SSL_CLIENT
  2
# define X509_TRUST_SSL_SERVER   3
# define X509_TRUST_EMAIL        4
# define X509_TRUST_OBJECT_SIGN  5
# define X509_TRUST_OCSP_SIGN    6
# define X509_TRUST_OCSP_REQUEST 7
# define X509_TRUST_TSA          8
/* Keep these up to date! */
# define X509_TRUST_MIN          1
# define X509_TRUST_MAX          8

/* trust_flags values */
# define X509_TRUST_DYNAMIC      (1U << 0)
# define X509_TRUST_DYNAMIC_NAME (1U << 1)
/* No compat trust if self-signed, preempts "DO_SS" */
# define X509_TRUST_NO_SS_COMPAT (1U << 2)
/* Compat trust if no explicit accepted trust EKUs */
# define X509_TRUST_DO_SS_COMPAT (1U << 3)
/* Accept "anyEKU" as a wildcard rejection OID and as a wildcard trust OID */
# define X509_TRUST_OK_ANY_EKU   (1U << 4)

/* check_trust return codes */
# define X509_TRUST_TRUSTED      1
# define X509_TRUST_REJECTED     2
# define X509_TRUST_UNTRUSTED    3

int X509_TRUST_set(int *t, int trust);
int X509_TRUST_get_count(void);
X509_TRUST *X509_TRUST_get0(int idx);
int
 X509_TRUST_get_by_id(int id);
int X509_TRUST_add(int id, int flags, int (*ck) (X509_TRUST *, X509 *, int),
                   const char *name, int arg1, void *arg2);
void X509_TRUST_cleanup(void);
int X509_TRUST_get_flags(const X509_TRUST *xp);
```

```
char *X509_TRUST_get0_name(const X509_TRUST *xp);
int X509_TRUST_get_trust(const X509_TRUST *xp);

int X509_trusted(const X509 *x);
int X509_add1_trust_object(X509 *x, const ASN1_OBJECT *obj);
int X509_add1_reject_object(X509 *x, const ASN1_OBJECT *obj);
void X509_trust_clear(X509 *x);
void X509_reject_clear(X509 *x);
STACK_OF(ASN1_OBJECT) *X509_get0_trust_objects(X509 *x);
STACK_OF(ASN1_OBJECT) *X509_get0_reject_objects(X509 *x);

int (*X509_TRUST_set_default(int (*trust) (int, X509 *, int))) (int, X509 *,
                                                int);
int X509_check_trust(X509 *x, int id, int flags);

int X509_verify_cert(X509_STORE_CTX *ctx);
int X509_STORE_CTX_verify(X509_STORE_CTX *ctx);
STACK_OF(X509) *X509_build_chain(X509
 *target, STACK_OF(X509) *certs,
                         X509_STORE *store, int with_self_signed,
                         OSSL_LIB_CTX *libctx, const char *propq);

int X509_STORE_set_depth(X509_STORE *store, int depth);

typedef int (*X509_STORE_CTX_verify_cb)(int, X509_STORE_CTX *);
int X509_STORE_CTX_print_verify_cb(int ok, X509_STORE_CTX *ctx);
typedef int (*X509_STORE_CTX_verify_fn)(X509_STORE_CTX *);
typedef int (*X509_STORE_CTX_get_issuer_fn)(X509 **issuer,
                                  X509_STORE_CTX *ctx, X509 *x);
typedef int (*X509_STORE_CTX_check_issued_fn)(X509_STORE_CTX *ctx,
                                    X509 *x, X509 *issuer);
typedef int (*X509_STORE_CTX_check_revocation_fn)(X509_STORE_CTX *ctx);
typedef int (*X509_STORE_CTX_get_crl_fn)(X509_STORE_CTX *ctx,
                                 X509_CRL **crl, X509 *x);
typedef int (*X509_STORE_CTX_check_crl_fn)(X509_STORE_CTX *ctx, X509_CRL *crl);
typedef
 int (*X509_STORE_CTX_cert_crl_fn)(X509_STORE_CTX *ctx,
                                   X509_CRL *crl, X509 *x);
typedef int (*X509_STORE_CTX_check_policy_fn)(X509_STORE_CTX *ctx);
typedef STACK_OF(X509)
   *(*X509_STORE_CTX_lookup_certs_fn)(X509_STORE_CTX *ctx,
                                const X509_NAME *nm);
typedef STACK_OF(X509_CRL)
   *(*X509_STORE_CTX_lookup_crls_fn)(const X509_STORE_CTX *ctx,
                                const X509_NAME *nm);
typedef int (*X509_STORE_CTX_cleanup_fn)(X509_STORE_CTX *ctx);

void X509_STORE_CTX_set_depth(X509_STORE_CTX *ctx, int depth);
```

```
# define X509_STORE_CTX_set_app_data(ctx,data) \
      X509_STORE_CTX_set_ex_data(ctx,0,data)
# define X509_STORE_CTX_get_app_data(ctx) \
      X509_STORE_CTX_get_ex_data(ctx,0)

# define X509_L_FILE_LOAD        1
# define X509_L_ADD_DIR          2
# define X509_L_ADD_STORE        3
# define X509_L_LOAD_STORE       4

# define X509_LOOKUP_load_file(x,name,type) \

  X509_LOOKUP_ctrl((x),X509_L_FILE_LOAD,(name),(long)(type),NULL)

# define X509_LOOKUP_add_dir(x,name,type) \
            X509_LOOKUP_ctrl((x),X509_L_ADD_DIR,(name),(long)(type),NULL)

# define X509_LOOKUP_add_store(x,name) \
            X509_LOOKUP_ctrl((x),X509_L_ADD_STORE,(name),0,NULL)

# define X509_LOOKUP_load_store(x,name) \
            X509_LOOKUP_ctrl((x),X509_L_LOAD_STORE,(name),0,NULL)

# define X509_LOOKUP_load_file_ex(x, name, type, libctx, propq)       \
X509_LOOKUP_ctrl_ex((x), X509_L_FILE_LOAD, (name), (long)(type), NULL,\
                (libctx), (propq))

# define X509_LOOKUP_load_store_ex(x, name, libctx, propq)           \
X509_LOOKUP_ctrl_ex((x), X509_L_LOAD_STORE, (name), 0, NULL,         \
                (libctx), (propq))

# define X509_LOOKUP_add_store_ex(x, name, libctx, propq)            \
X509_LOOKUP_ctrl_ex((x), X509_L_ADD_STORE, (name), 0, NULL,          \
                (libctx), (propq))

# define X509_V_OK
                  0
# define X509_V_ERR_UNSPECIFIED                      1
# define X509_V_ERR_UNABLE_TO_GET_ISSUER_CERT          2
# define X509_V_ERR_UNABLE_TO_GET_CRL                3
# define X509_V_ERR_UNABLE_TO_DECRYPT_CERT_SIGNATURE     4
# define X509_V_ERR_UNABLE_TO_DECRYPT_CRL_SIGNATURE      5
# define X509_V_ERR_UNABLE_TO_DECODE_ISSUER_PUBLIC_KEY   6
# define X509_V_ERR_CERT_SIGNATURE_FAILURE             7
# define X509_V_ERR_CRL_SIGNATURE_FAILURE              8
# define X509_V_ERR_CERT_NOT_YET_VALID                 9
# define X509_V_ERR_CERT_HAS_EXPIRED                   10
```

```
# define X509_V_ERR_CRL_NOT_YET_VALID                 11
# define X509_V_ERR_CRL_HAS_EXPIRED                   12
# define X509_V_ERR_ERROR_IN_CERT_NOT_BEFORE_FIELD    13
# define X509_V_ERR_ERROR_IN_CERT_NOT_AFTER_FIELD     14
# define X509_V_ERR_ERROR_IN_CRL_LAST_UPDATE_FIELD    15
# define X509_V_ERR_ERROR_IN_CRL_NEXT_UPDATE_FIELD    16
# define X509_V_ERR_OUT_OF_MEM
                    17
# define X509_V_ERR_DEPTH_ZERO_SELF_SIGNED_CERT       18
# define X509_V_ERR_SELF_SIGNED_CERT_IN_CHAIN         19
# define X509_V_ERR_UNABLE_TO_GET_ISSUER_CERT_LOCALLY 20
# define X509_V_ERR_UNABLE_TO_VERIFY_LEAF_SIGNATURE   21
# define X509_V_ERR_CERT_CHAIN_TOO_LONG               22
# define X509_V_ERR_CERT_REVOKED                      23
# define X509_V_ERR_NO_ISSUER_PUBLIC_KEY              24
# define X509_V_ERR_PATH_LENGTH_EXCEEDED              25
# define X509_V_ERR_INVALID_PURPOSE                   26
# define X509_V_ERR_CERT_UNTRUSTED                    27
# define X509_V_ERR_CERT_REJECTED                     28

/* These are 'informational' when looking for issuer cert */
# define X509_V_ERR_SUBJECT_ISSUER_MISMATCH           29
# define X509_V_ERR_AKID_SKID_MISMATCH                30
# define X509_V_ERR_AKID_ISSUER_SERIAL_MISMATCH       31
# define X509_V_ERR_KEYUSAGE_NO_CERTSIGN              32
# define
 X509_V_ERR_UNABLE_TO_GET_CRL_ISSUER                 33
# define X509_V_ERR_UNHANDLED_CRITICAL_EXTENSION      34
# define X509_V_ERR_KEYUSAGE_NO_CRL_SIGN              35
# define X509_V_ERR_UNHANDLED_CRITICAL_CRL_EXTENSION  36
# define X509_V_ERR_INVALID_NON_CA                    37
# define X509_V_ERR_PROXY_PATH_LENGTH_EXCEEDED        38
# define X509_V_ERR_KEYUSAGE_NO_DIGITAL_SIGNATURE     39
# define X509_V_ERR_PROXY_CERTIFICATES_NOT_ALLOWED    40
# define X509_V_ERR_INVALID_EXTENSION                 41
# define X509_V_ERR_INVALID_POLICY_EXTENSION          42
# define X509_V_ERR_NO_EXPLICIT_POLICY                43
# define X509_V_ERR_DIFFERENT_CRL_SCOPE               44
# define X509_V_ERR_UNSUPPORTED_EXTENSION_FEATURE     45
# define X509_V_ERR_UNNESTED_RESOURCE                 46
# define X509_V_ERR_PERMITTED_VIOLATION               47
# define X509_V_ERR_EXCLUDED_VIOLATION                48
# define X509_V_ERR_SUBTREE_MINMAX
            49
/* The application is not happy */
# define X509_V_ERR_APPLICATION_VERIFICATION          50
# define X509_V_ERR_UNSUPPORTED_CONSTRAINT_TYPE       51
# define X509_V_ERR_UNSUPPORTED_CONSTRAINT_SYNTAX     52
```

```
# define X509_V_ERR_UNSUPPORTED_NAME_SYNTAX            53
# define X509_V_ERR_CRL_PATH_VALIDATION_ERROR          54
/* Another issuer check debug option */
# define X509_V_ERR_PATH_LOOP                          55
/* Suite B mode algorithm violation */
# define X509_V_ERR_SUITE_B_INVALID_VERSION            56
# define X509_V_ERR_SUITE_B_INVALID_ALGORITHM          57
# define X509_V_ERR_SUITE_B_INVALID_CURVE              58
# define X509_V_ERR_SUITE_B_INVALID_SIGNATURE_ALGORITHM  59
# define X509_V_ERR_SUITE_B_LOS_NOT_ALLOWED            60
# define X509_V_ERR_SUITE_B_CANNOT_SIGN_P_384_WITH_P_256 61
/* Host, email and IP check errors */
# define X509_V_ERR_HOSTNAME_MISMATCH                  62
# define X509_V_ERR_EMAIL_MISMATCH
      63
# define X509_V_ERR_IP_ADDRESS_MISMATCH                64
/* DANE TLSA errors */
# define X509_V_ERR_DANE_NO_MATCH                      65
/* security level errors */
# define X509_V_ERR_EE_KEY_TOO_SMALL                   66
# define X509_V_ERR_CA_KEY_TOO_SMALL                   67
# define X509_V_ERR_CA_MD_TOO_WEAK                     68
/* Caller error */
# define X509_V_ERR_INVALID_CALL                       69
/* Issuer lookup error */
# define X509_V_ERR_STORE_LOOKUP                       70
/* Certificate transparency */
# define X509_V_ERR_NO_VALID_SCTS                      71

# define X509_V_ERR_PROXY_SUBJECT_NAME_VIOLATION       72
/* OCSP status errors */
# define X509_V_ERR_OCSP_VERIFY_NEEDED                 73  /* Need OCSP verification */
# define X509_V_ERR_OCSP_VERIFY_FAILED                 74  /* Couldn't verify cert through OCSP */
# define X509_V_ERR_OCSP_CERT_UNKNOWN                  75  /* Certificate wasn't recognized by the OCSP
responder
 */

# define X509_V_ERR_UNSUPPORTED_SIGNATURE_ALGORITHM    76
# define X509_V_ERR_SIGNATURE_ALGORITHM_MISMATCH       77

/* Errors in case a check in X509_V_FLAG_X509_STRICT mode fails */
# define X509_V_ERR_SIGNATURE_ALGORITHM_INCONSISTENCY  78
# define X509_V_ERR_INVALID_CA                         79
# define X509_V_ERR_PATHLEN_INVALID_FOR_NON_CA         80
# define X509_V_ERR_PATHLEN_WITHOUT_KU_KEY_CERT_SIGN   81
# define X509_V_ERR_KU_KEY_CERT_SIGN_INVALID_FOR_NON_CA  82
# define X509_V_ERR_ISSUER_NAME_EMPTY                  83
# define X509_V_ERR_SUBJECT_NAME_EMPTY                 84
```

```
# define X509_V_ERR_MISSING_AUTHORITY_KEY_IDENTIFIER     85
# define X509_V_ERR_MISSING_SUBJECT_KEY_IDENTIFIER       86
# define X509_V_ERR_EMPTY_SUBJECT_ALT_NAME              87
# define X509_V_ERR_EMPTY_SUBJECT_SAN_NOT_CRITICAL       88
# define X509_V_ERR_CA_BCONS_NOT_CRITICAL               89
# define X509_V_ERR_AUTHORITY_KEY_IDENTIFIER_CRITICAL    90
# define X509_V_ERR_SUBJECT_KEY_IDENTIFIER_CRITICAL
    91
# define X509_V_ERR_CA_CERT_MISSING_KEY_USAGE           92
# define X509_V_ERR_EXTENSIONS_REQUIRE_VERSION_3        93
# define X509_V_ERR_EC_KEY_EXPLICIT_PARAMS              94

/* Certificate verify flags */
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define X509_V_FLAG_CB_ISSUER_CHECK           0x0   /* Deprecated */
# endif
/* Use check time instead of current time */
# define X509_V_FLAG_USE_CHECK_TIME             0x2
/* Lookup CRLs */
# define X509_V_FLAG_CRL_CHECK                  0x4
/* Lookup CRLs for whole chain */
# define X509_V_FLAG_CRL_CHECK_ALL              0x8
/* Ignore unhandled critical extensions */
# define X509_V_FLAG_IGNORE_CRITICAL            0x10
/* Disable workarounds for broken certificates */
# define X509_V_FLAG_X509_STRICT                0x20
/* Enable proxy certificate validation */
# define X509_V_FLAG_ALLOW_PROXY_CERTS          0x40
/* Enable policy checking */
# define X509_V_FLAG_POLICY_CHECK
  0x80
/* Policy variable require-explicit-policy */
# define X509_V_FLAG_EXPLICIT_POLICY            0x100
/* Policy variable inhibit-any-policy */
# define X509_V_FLAG_INHIBIT_ANY                0x200
/* Policy variable inhibit-policy-mapping */
# define X509_V_FLAG_INHIBIT_MAP                0x400
/* Notify callback that policy is OK */
# define X509_V_FLAG_NOTIFY_POLICY              0x800
/* Extended CRL features such as indirect CRLs, alternate CRL signing keys */
# define X509_V_FLAG_EXTENDED_CRL_SUPPORT       0x1000
/* Delta CRL support */
# define X509_V_FLAG_USE_DELTAS                 0x2000
/* Check self-signed CA signature */
# define X509_V_FLAG_CHECK_SS_SIGNATURE         0x4000
/* Use trusted store first */
# define X509_V_FLAG_TRUSTED_FIRST              0x8000
/* Suite B 128 bit only mode: not normally used */
```

```
# define X509_V_FLAG_SUITEB_128_LOS_ONLY        0x10000
/* Suite B 192 bit only mode */
# define X509_V_FLAG_SUITEB_192_LOS             0x20000
/* Suite B
 128 bit mode allowing 192 bit algorithms */
# define X509_V_FLAG_SUITEB_128_LOS             0x30000
/* Allow partial chains if at least one certificate is in trusted store */
# define X509_V_FLAG_PARTIAL_CHAIN              0x80000
/*
* If the initial chain is not trusted, do not attempt to build an alternative
* chain. Alternate chain checking was introduced in 1.1.0. Setting this flag
* will force the behaviour to match that of previous versions.
*/
# define X509_V_FLAG_NO_ALT_CHAINS              0x100000
/* Do not check certificate/CRL validity against current time */
# define X509_V_FLAG_NO_CHECK_TIME              0x200000

# define X509_VP_FLAG_DEFAULT                   0x1
# define X509_VP_FLAG_OVERWRITE                 0x2
# define X509_VP_FLAG_RESET_FLAGS               0x4
# define X509_VP_FLAG_LOCKED                    0x8
# define X509_VP_FLAG_ONCE                      0x10

/* Internal use: mask of policy related options */
# define X509_V_FLAG_POLICY_MASK (X509_V_FLAG_POLICY_CHECK
 \
                        | X509_V_FLAG_EXPLICIT_POLICY \
                        | X509_V_FLAG_INHIBIT_ANY \
                        | X509_V_FLAG_INHIBIT_MAP)

int X509_OBJECT_idx_by_subject(STACK_OF(X509_OBJECT) *h, X509_LOOKUP_TYPE type,
                       const X509_NAME *name);
X509_OBJECT *X509_OBJECT_retrieve_by_subject(STACK_OF(X509_OBJECT) *h,
                                    X509_LOOKUP_TYPE type,
                                    const X509_NAME *name);
X509_OBJECT *X509_OBJECT_retrieve_match(STACK_OF(X509_OBJECT) *h,
                                X509_OBJECT *x);
int X509_OBJECT_up_ref_count(X509_OBJECT *a);
X509_OBJECT *X509_OBJECT_new(void);
void X509_OBJECT_free(X509_OBJECT *a);
X509_LOOKUP_TYPE X509_OBJECT_get_type(const X509_OBJECT *a);
X509 *X509_OBJECT_get0_X509(const X509_OBJECT *a);
int X509_OBJECT_set1_X509(X509_OBJECT *a, X509 *obj);
X509_CRL *X509_OBJECT_get0_X509_CRL(const
 X509_OBJECT *a);
int X509_OBJECT_set1_X509_CRL(X509_OBJECT *a, X509_CRL *obj);
X509_STORE *X509_STORE_new(void);
void X509_STORE_free(X509_STORE *v);
```

```
int X509_STORE_lock(X509_STORE *ctx);
int X509_STORE_unlock(X509_STORE *ctx);
int X509_STORE_up_ref(X509_STORE *v);
STACK_OF(X509_OBJECT) *X509_STORE_get0_objects(const X509_STORE *v);
STACK_OF(X509) *X509_STORE_get1_all_certs(X509_STORE *st);
STACK_OF(X509) *X509_STORE_CTX_get1_certs(X509_STORE_CTX *st,
                                const X509_NAME *nm);
STACK_OF(X509_CRL) *X509_STORE_CTX_get1_crls(const X509_STORE_CTX *st,
                                 const X509_NAME *nm);
int X509_STORE_set_flags(X509_STORE *ctx, unsigned long flags);
int X509_STORE_set_purpose(X509_STORE *ctx, int purpose);
int X509_STORE_set_trust(X509_STORE *ctx, int trust);
int X509_STORE_set1_param(X509_STORE *ctx, const X509_VERIFY_PARAM *pm);
X509_VERIFY_PARAM *X509_STORE_get0_param(const X509_STORE *ctx);

void X509_STORE_set_verify(X509_STORE
 *ctx, X509_STORE_CTX_verify_fn verify);
#define X509_STORE_set_verify_func(ctx, func) \
        X509_STORE_set_verify((ctx),(func))
void X509_STORE_CTX_set_verify(X509_STORE_CTX *ctx,
                       X509_STORE_CTX_verify_fn verify);
X509_STORE_CTX_verify_fn X509_STORE_get_verify(const X509_STORE *ctx);
void X509_STORE_set_verify_cb(X509_STORE *ctx,
                      X509_STORE_CTX_verify_cb verify_cb);
# define X509_STORE_set_verify_cb_func(ctx,func) \
        X509_STORE_set_verify_cb((ctx),(func))
X509_STORE_CTX_verify_cb X509_STORE_get_verify_cb(const X509_STORE *ctx);
void X509_STORE_set_get_issuer(X509_STORE *ctx,
                       X509_STORE_CTX_get_issuer_fn get_issuer);
X509_STORE_CTX_get_issuer_fn X509_STORE_get_get_issuer(const X509_STORE *ctx);
void X509_STORE_set_check_issued(X509_STORE *ctx,
                         X509_STORE_CTX_check_issued_fn check_issued);
X509_STORE_CTX_check_issued_fn X509_STORE_get_check_issued(const
 X509_STORE *ctx);
void X509_STORE_set_check_revocation(X509_STORE *ctx,
                           X509_STORE_CTX_check_revocation_fn check_revocation);
X509_STORE_CTX_check_revocation_fn
   X509_STORE_get_check_revocation(const X509_STORE *ctx);
void X509_STORE_set_get_crl(X509_STORE *ctx,
                    X509_STORE_CTX_get_crl_fn get_crl);
X509_STORE_CTX_get_crl_fn X509_STORE_get_get_crl(const X509_STORE *ctx);
void X509_STORE_set_check_crl(X509_STORE *ctx,
                       X509_STORE_CTX_check_crl_fn check_crl);
X509_STORE_CTX_check_crl_fn X509_STORE_get_check_crl(const X509_STORE *ctx);
void X509_STORE_set_cert_crl(X509_STORE *ctx,
                     X509_STORE_CTX_cert_crl_fn cert_crl);
X509_STORE_CTX_cert_crl_fn X509_STORE_get_cert_crl(const X509_STORE *ctx);
void X509_STORE_set_check_policy(X509_STORE *ctx,
```

```
                        X509_STORE_CTX_check_policy_fn check_policy);
X509_STORE_CTX_check_policy_fn
 X509_STORE_get_check_policy(const X509_STORE *ctx);
void X509_STORE_set_lookup_certs(X509_STORE *ctx,
                        X509_STORE_CTX_lookup_certs_fn lookup_certs);
X509_STORE_CTX_lookup_certs_fn X509_STORE_get_lookup_certs(const X509_STORE *ctx);
void X509_STORE_set_lookup_crls(X509_STORE *ctx,
                       X509_STORE_CTX_lookup_crls_fn lookup_crls);
#define X509_STORE_set_lookup_crls_cb(ctx, func) \
  X509_STORE_set_lookup_crls((ctx), (func))
X509_STORE_CTX_lookup_crls_fn X509_STORE_get_lookup_crls(const X509_STORE *ctx);
void X509_STORE_set_cleanup(X509_STORE *ctx,
                     X509_STORE_CTX_cleanup_fn cleanup);
X509_STORE_CTX_cleanup_fn X509_STORE_get_cleanup(const X509_STORE *ctx);

#define X509_STORE_get_ex_new_index(l, p, newf, dupf, freef) \
  CRYPTO_get_ex_new_index(CRYPTO_EX_INDEX_X509_STORE, l, p, newf, dupf, freef)
int X509_STORE_set_ex_data(X509_STORE *ctx, int idx, void *data);
void *X509_STORE_get_ex_data(const X509_STORE
 *ctx, int idx);

X509_STORE_CTX *X509_STORE_CTX_new_ex(OSSL_LIB_CTX *libctx, const char *propq);
X509_STORE_CTX *X509_STORE_CTX_new(void);

int X509_STORE_CTX_get1_issuer(X509 **issuer, X509_STORE_CTX *ctx, X509 *x);

void X509_STORE_CTX_free(X509_STORE_CTX *ctx);
int X509_STORE_CTX_init(X509_STORE_CTX *ctx, X509_STORE *trust_store,
                 X509 *target, STACK_OF(X509) *untrusted);
void X509_STORE_CTX_set0_trusted_stack(X509_STORE_CTX *ctx, STACK_OF(X509) *sk);
void X509_STORE_CTX_cleanup(X509_STORE_CTX *ctx);

X509_STORE *X509_STORE_CTX_get0_store(const X509_STORE_CTX *ctx);
X509 *X509_STORE_CTX_get0_cert(const X509_STORE_CTX *ctx);
STACK_OF(X509)* X509_STORE_CTX_get0_untrusted(const X509_STORE_CTX *ctx);
void X509_STORE_CTX_set0_untrusted(X509_STORE_CTX *ctx, STACK_OF(X509) *sk);
void X509_STORE_CTX_set_verify_cb(X509_STORE_CTX *ctx,
                        X509_STORE_CTX_verify_cb verify);
X509_STORE_CTX_verify_cb X509_STORE_CTX_get_verify_cb(const
 X509_STORE_CTX *ctx);
X509_STORE_CTX_verify_fn X509_STORE_CTX_get_verify(const X509_STORE_CTX *ctx);
X509_STORE_CTX_get_issuer_fn X509_STORE_CTX_get_get_issuer(const X509_STORE_CTX *ctx);
X509_STORE_CTX_check_issued_fn X509_STORE_CTX_get_check_issued(const X509_STORE_CTX *ctx);
X509_STORE_CTX_check_revocation_fn X509_STORE_CTX_get_check_revocation(const X509_STORE_CTX
*ctx);
X509_STORE_CTX_get_crl_fn X509_STORE_CTX_get_get_crl(const X509_STORE_CTX *ctx);
X509_STORE_CTX_check_crl_fn X509_STORE_CTX_get_check_crl(const X509_STORE_CTX *ctx);
X509_STORE_CTX_cert_crl_fn X509_STORE_CTX_get_cert_crl(const X509_STORE_CTX *ctx);
```

```
X509_STORE_CTX_check_policy_fn X509_STORE_CTX_get_check_policy(const X509_STORE_CTX *ctx);
X509_STORE_CTX_lookup_certs_fn X509_STORE_CTX_get_lookup_certs(const X509_STORE_CTX *ctx);
X509_STORE_CTX_lookup_crls_fn X509_STORE_CTX_get_lookup_crls(const X509_STORE_CTX *ctx);
X509_STORE_CTX_cleanup_fn X509_STORE_CTX_get_cleanup(const X509_STORE_CTX *ctx);

#ifndef OPENSSL_NO_DEPRECATED_1_1_0
#
 define X509_STORE_CTX_get_chain X509_STORE_CTX_get0_chain
# define X509_STORE_CTX_set_chain X509_STORE_CTX_set0_untrusted
# define X509_STORE_CTX_trusted_stack X509_STORE_CTX_set0_trusted_stack
# define X509_STORE_get_by_subject X509_STORE_CTX_get_by_subject
# define X509_STORE_get1_certs X509_STORE_CTX_get1_certs
# define X509_STORE_get1_crls X509_STORE_CTX_get1_crls
/* the following macro is misspelled; use X509_STORE_get1_certs instead */
# define X509_STORE_get1_cert X509_STORE_CTX_get1_certs
/* the following macro is misspelled; use X509_STORE_get1_crls instead */
# define X509_STORE_get1_crl X509_STORE_CTX_get1_crls
#endif

X509_LOOKUP *X509_STORE_add_lookup(X509_STORE *v, X509_LOOKUP_METHOD *m);
X509_LOOKUP_METHOD *X509_LOOKUP_hash_dir(void);
X509_LOOKUP_METHOD *X509_LOOKUP_file(void);
X509_LOOKUP_METHOD *X509_LOOKUP_store(void);

typedef int (*X509_LOOKUP_ctrl_fn)(X509_LOOKUP *ctx, int cmd, const char *argc,
                                   long argl, char **ret);
typedef
 int (*X509_LOOKUP_ctrl_ex_fn)(
   X509_LOOKUP *ctx, int cmd, const char *argc, long argl, char **ret,
   OSSL_LIB_CTX *libctx, const char *propq);

typedef int (*X509_LOOKUP_get_by_subject_fn)(X509_LOOKUP *ctx,
                                             X509_LOOKUP_TYPE type,
                                             const X509_NAME *name,
                                             X509_OBJECT *ret);
typedef int (*X509_LOOKUP_get_by_subject_ex_fn)(X509_LOOKUP *ctx,
                                                X509_LOOKUP_TYPE type,
                                                const X509_NAME *name,
                                                X509_OBJECT *ret,
                                                OSSL_LIB_CTX *libctx,
                                                const char *propq);
typedef int (*X509_LOOKUP_get_by_issuer_serial_fn)(X509_LOOKUP *ctx,

    X509_LOOKUP_TYPE type,
                                           const X509_NAME *name,
                                           const ASN1_INTEGER *serial,
                                           X509_OBJECT *ret);
typedef int (*X509_LOOKUP_get_by_fingerprint_fn)(X509_LOOKUP *ctx,
```

```
                                X509_LOOKUP_TYPE type,
                                const unsigned char* bytes,
                                int len,
                                X509_OBJECT *ret);
typedef int (*X509_LOOKUP_get_by_alias_fn)(X509_LOOKUP *ctx,
                                X509_LOOKUP_TYPE type,
                                const char *str,
                                int len,
                                X509_OBJECT *ret);

X509_LOOKUP_METHOD *X509_LOOKUP_meth_new(const char *name);
void X509_LOOKUP_meth_free(X509_LOOKUP_METHOD
 *method);

int X509_LOOKUP_meth_set_new_item(X509_LOOKUP_METHOD *method,
                        int (*new_item) (X509_LOOKUP *ctx));
int (*X509_LOOKUP_meth_get_new_item(const X509_LOOKUP_METHOD* method))
  (X509_LOOKUP *ctx);

int X509_LOOKUP_meth_set_free(X509_LOOKUP_METHOD *method,
                        void (*free_fn) (X509_LOOKUP *ctx));
void (*X509_LOOKUP_meth_get_free(const X509_LOOKUP_METHOD* method))
  (X509_LOOKUP *ctx);

int X509_LOOKUP_meth_set_init(X509_LOOKUP_METHOD *method,
                        int (*init) (X509_LOOKUP *ctx));
int (*X509_LOOKUP_meth_get_init(const X509_LOOKUP_METHOD* method))
  (X509_LOOKUP *ctx);

int X509_LOOKUP_meth_set_shutdown(X509_LOOKUP_METHOD *method,
                        int (*shutdown) (X509_LOOKUP *ctx));
int (*X509_LOOKUP_meth_get_shutdown(const X509_LOOKUP_METHOD* method))
  (X509_LOOKUP *ctx);

int X509_LOOKUP_meth_set_ctrl(X509_LOOKUP_METHOD *method,
                        X509_LOOKUP_ctrl_fn
 ctrl_fn);
X509_LOOKUP_ctrl_fn X509_LOOKUP_meth_get_ctrl(const X509_LOOKUP_METHOD *method);

int X509_LOOKUP_meth_set_get_by_subject(X509_LOOKUP_METHOD *method,
                                X509_LOOKUP_get_by_subject_fn fn);
X509_LOOKUP_get_by_subject_fn X509_LOOKUP_meth_get_get_by_subject(
  const X509_LOOKUP_METHOD *method);

int X509_LOOKUP_meth_set_get_by_issuer_serial(X509_LOOKUP_METHOD *method,
  X509_LOOKUP_get_by_issuer_serial_fn fn);
X509_LOOKUP_get_by_issuer_serial_fn X509_LOOKUP_meth_get_get_by_issuer_serial(
  const X509_LOOKUP_METHOD *method);
```

```
int X509_LOOKUP_meth_set_get_by_fingerprint(X509_LOOKUP_METHOD *method,
  X509_LOOKUP_get_by_fingerprint_fn fn);
X509_LOOKUP_get_by_fingerprint_fn X509_LOOKUP_meth_get_get_by_fingerprint(
  const X509_LOOKUP_METHOD *method);

int X509_LOOKUP_meth_set_get_by_alias(X509_LOOKUP_METHOD *method,
                          X509_LOOKUP_get_by_alias_fn fn);
X509_LOOKUP_get_by_alias_fn X509_LOOKUP_meth_get_get_by_alias(
   const X509_LOOKUP_METHOD *method);


int X509_STORE_add_cert(X509_STORE *ctx, X509 *x);
int X509_STORE_add_crl(X509_STORE *ctx, X509_CRL *x);

int X509_STORE_CTX_get_by_subject(const X509_STORE_CTX *vs,
                          X509_LOOKUP_TYPE type,
                          const X509_NAME *name, X509_OBJECT *ret);
X509_OBJECT *X509_STORE_CTX_get_obj_by_subject(X509_STORE_CTX *vs,
                                  X509_LOOKUP_TYPE type,
                                  const X509_NAME *name);

int X509_LOOKUP_ctrl(X509_LOOKUP *ctx, int cmd, const char *argc,
               long argl, char **ret);
int X509_LOOKUP_ctrl_ex(X509_LOOKUP *ctx, int cmd, const char *argc, long argl,
                char **ret, OSSL_LIB_CTX *libctx, const char *propq);

int X509_load_cert_file(X509_LOOKUP *ctx, const char *file, int type);
int X509_load_cert_file_ex(X509_LOOKUP *ctx, const char *file, int type,

        OSSL_LIB_CTX *libctx, const char *propq);
int X509_load_crl_file(X509_LOOKUP *ctx, const char *file, int type);
int X509_load_cert_crl_file(X509_LOOKUP *ctx, const char *file, int type);
int X509_load_cert_crl_file_ex(X509_LOOKUP *ctx, const char *file, int type,
                       OSSL_LIB_CTX *libctx, const char *propq);

X509_LOOKUP *X509_LOOKUP_new(X509_LOOKUP_METHOD *method);
void X509_LOOKUP_free(X509_LOOKUP *ctx);
int X509_LOOKUP_init(X509_LOOKUP *ctx);
int X509_LOOKUP_by_subject(X509_LOOKUP *ctx, X509_LOOKUP_TYPE type,
                   const X509_NAME *name, X509_OBJECT *ret);
int X509_LOOKUP_by_subject_ex(X509_LOOKUP *ctx, X509_LOOKUP_TYPE type,
                      const X509_NAME *name, X509_OBJECT *ret,
                      OSSL_LIB_CTX *libctx, const char *propq);
int X509_LOOKUP_by_issuer_serial(X509_LOOKUP *ctx, X509_LOOKUP_TYPE type,
                         const X509_NAME *name,
```

```
 const ASN1_INTEGER *serial,
                          X509_OBJECT *ret);
int X509_LOOKUP_by_fingerprint(X509_LOOKUP *ctx, X509_LOOKUP_TYPE type,
                          const unsigned char *bytes, int len,
                          X509_OBJECT *ret);
int X509_LOOKUP_by_alias(X509_LOOKUP *ctx, X509_LOOKUP_TYPE type,
                   const char *str, int len, X509_OBJECT *ret);
int X509_LOOKUP_set_method_data(X509_LOOKUP *ctx, void *data);
void *X509_LOOKUP_get_method_data(const X509_LOOKUP *ctx);
X509_STORE *X509_LOOKUP_get_store(const X509_LOOKUP *ctx);
int X509_LOOKUP_shutdown(X509_LOOKUP *ctx);

int X509_STORE_load_file(X509_STORE *ctx, const char *file);
int X509_STORE_load_path(X509_STORE *ctx, const char *path);
int X509_STORE_load_store(X509_STORE *ctx, const char *store);
int X509_STORE_load_locations(X509_STORE *ctx,
                                  const char *file,
                                  const char *dir);
int X509_STORE_set_default_paths(X509_STORE
 *ctx);

int X509_STORE_load_file_ex(X509_STORE *ctx, const char *file,
                     OSSL_LIB_CTX *libctx, const char *propq);
int X509_STORE_load_store_ex(X509_STORE *ctx, const char *store,
                      OSSL_LIB_CTX *libctx, const char *propq);
int X509_STORE_load_locations_ex(X509_STORE *ctx, const char *file,
                         const char *dir, OSSL_LIB_CTX *libctx,
                         const char *propq);
int X509_STORE_set_default_paths_ex(X509_STORE *ctx, OSSL_LIB_CTX *libctx,
                           const char *propq);

#define X509_STORE_CTX_get_ex_new_index(l, p, newf, dupf, freef) \
  CRYPTO_get_ex_new_index(CRYPTO_EX_INDEX_X509_STORE_CTX, l, p, newf, dupf, freef)
int X509_STORE_CTX_set_ex_data(X509_STORE_CTX *ctx, int idx, void *data);
void *X509_STORE_CTX_get_ex_data(const X509_STORE_CTX *ctx, int idx);
int X509_STORE_CTX_get_error(const X509_STORE_CTX *ctx);
void X509_STORE_CTX_set_error(X509_STORE_CTX
 *ctx, int s);
int X509_STORE_CTX_get_error_depth(const X509_STORE_CTX *ctx);
void X509_STORE_CTX_set_error_depth(X509_STORE_CTX *ctx, int depth);
X509 *X509_STORE_CTX_get_current_cert(const X509_STORE_CTX *ctx);
void X509_STORE_CTX_set_current_cert(X509_STORE_CTX *ctx, X509 *x);
X509 *X509_STORE_CTX_get0_current_issuer(const X509_STORE_CTX *ctx);
X509_CRL *X509_STORE_CTX_get0_current_crl(const X509_STORE_CTX *ctx);
X509_STORE_CTX *X509_STORE_CTX_get0_parent_ctx(const X509_STORE_CTX *ctx);
STACK_OF(X509) *X509_STORE_CTX_get0_chain(const X509_STORE_CTX *ctx);
STACK_OF(X509) *X509_STORE_CTX_get1_chain(const X509_STORE_CTX *ctx);
void X509_STORE_CTX_set_cert(X509_STORE_CTX *ctx, X509 *target);
```

```
void X509_STORE_CTX_set0_verified_chain(X509_STORE_CTX *c, STACK_OF(X509) *sk);
void X509_STORE_CTX_set0_crls(X509_STORE_CTX *ctx, STACK_OF(X509_CRL) *sk);
int X509_STORE_CTX_set_purpose(X509_STORE_CTX *ctx, int purpose);
int X509_STORE_CTX_set_trust(X509_STORE_CTX
 *ctx, int trust);
int X509_STORE_CTX_purpose_inherit(X509_STORE_CTX *ctx, int def_purpose,
                           int purpose, int trust);
void X509_STORE_CTX_set_flags(X509_STORE_CTX *ctx, unsigned long flags);
void X509_STORE_CTX_set_time(X509_STORE_CTX *ctx, unsigned long flags,
                         time_t t);

X509_POLICY_TREE *X509_STORE_CTX_get0_policy_tree(const X509_STORE_CTX *ctx);
int X509_STORE_CTX_get_explicit_policy(const X509_STORE_CTX *ctx);
int X509_STORE_CTX_get_num_untrusted(const X509_STORE_CTX *ctx);

X509_VERIFY_PARAM *X509_STORE_CTX_get0_param(const X509_STORE_CTX *ctx);
void X509_STORE_CTX_set0_param(X509_STORE_CTX *ctx, X509_VERIFY_PARAM *param);
int X509_STORE_CTX_set_default(X509_STORE_CTX *ctx, const char *name);

/*
* Bridge opacity barrier between libcrypt and libssl, also needed to support
* offline testing in test/danetest.c
*/
void X509_STORE_CTX_set0_dane(X509_STORE_CTX *ctx, SSL_DANE *dane);
#define DANE_FLAG_NO_DANE_EE_NAMECHECKS
 (1L << 0)

/* X509_VERIFY_PARAM functions */

X509_VERIFY_PARAM *X509_VERIFY_PARAM_new(void);
void X509_VERIFY_PARAM_free(X509_VERIFY_PARAM *param);
int X509_VERIFY_PARAM_inherit(X509_VERIFY_PARAM *to,
                          const X509_VERIFY_PARAM *from);
int X509_VERIFY_PARAM_set1(X509_VERIFY_PARAM *to,
                       const X509_VERIFY_PARAM *from);
int X509_VERIFY_PARAM_set1_name(X509_VERIFY_PARAM *param, const char *name);
int X509_VERIFY_PARAM_set_flags(X509_VERIFY_PARAM *param,
                            unsigned long flags);
int X509_VERIFY_PARAM_clear_flags(X509_VERIFY_PARAM *param,
                              unsigned long flags);
unsigned long X509_VERIFY_PARAM_get_flags(const X509_VERIFY_PARAM *param);
int X509_VERIFY_PARAM_set_purpose(X509_VERIFY_PARAM *param, int purpose);
int X509_VERIFY_PARAM_set_trust(X509_VERIFY_PARAM *param, int trust);
void X509_VERIFY_PARAM_set_depth(X509_VERIFY_PARAM *param, int depth);
void X509_VERIFY_PARAM_set_auth_level(X509_VERIFY_PARAM
 *param, int auth_level);
time_t X509_VERIFY_PARAM_get_time(const X509_VERIFY_PARAM *param);
void X509_VERIFY_PARAM_set_time(X509_VERIFY_PARAM *param, time_t t);
```

```
int X509_VERIFY_PARAM_add0_policy(X509_VERIFY_PARAM *param,
                        ASN1_OBJECT *policy);
int X509_VERIFY_PARAM_set1_policies(X509_VERIFY_PARAM *param,
                         STACK_OF(ASN1_OBJECT) *policies);

int X509_VERIFY_PARAM_set_inh_flags(X509_VERIFY_PARAM *param,
                         uint32_t flags);
uint32_t X509_VERIFY_PARAM_get_inh_flags(const X509_VERIFY_PARAM *param);

char *X509_VERIFY_PARAM_get0_host(X509_VERIFY_PARAM *param, int idx);
int X509_VERIFY_PARAM_set1_host(X509_VERIFY_PARAM *param,
                        const char *name, size_t namelen);
int X509_VERIFY_PARAM_add1_host(X509_VERIFY_PARAM *param,
                        const char *name, size_t namelen);
void X509_VERIFY_PARAM_set_hostflags(X509_VERIFY_PARAM
 *param,
                         unsigned int flags);
unsigned int X509_VERIFY_PARAM_get_hostflags(const X509_VERIFY_PARAM *param);
char *X509_VERIFY_PARAM_get0_peername(const X509_VERIFY_PARAM *param);
void X509_VERIFY_PARAM_move_peername(X509_VERIFY_PARAM *, X509_VERIFY_PARAM *);
char *X509_VERIFY_PARAM_get0_email(X509_VERIFY_PARAM *param);
int X509_VERIFY_PARAM_set1_email(X509_VERIFY_PARAM *param,
                        const char *email, size_t emaillen);
char *X509_VERIFY_PARAM_get1_ip_asc(X509_VERIFY_PARAM *param);
int X509_VERIFY_PARAM_set1_ip(X509_VERIFY_PARAM *param,
                       const unsigned char *ip, size_t iplen);
int X509_VERIFY_PARAM_set1_ip_asc(X509_VERIFY_PARAM *param,
                        const char *ipasc);

int X509_VERIFY_PARAM_get_depth(const X509_VERIFY_PARAM *param);
int X509_VERIFY_PARAM_get_auth_level(const X509_VERIFY_PARAM *param);
const char *X509_VERIFY_PARAM_get0_name(const X509_VERIFY_PARAM *param);

int
 X509_VERIFY_PARAM_add0_table(X509_VERIFY_PARAM *param);
int X509_VERIFY_PARAM_get_count(void);
const X509_VERIFY_PARAM *X509_VERIFY_PARAM_get0(int id);
const X509_VERIFY_PARAM *X509_VERIFY_PARAM_lookup(const char *name);
void X509_VERIFY_PARAM_table_cleanup(void);

/* Non positive return values are errors */
#define X509_PCY_TREE_FAILURE  -2 /* Failure to satisfy explicit policy */
#define X509_PCY_TREE_INVALID  -1 /* Inconsistent or invalid extensions */
#define X509_PCY_TREE_INTERNAL  0 /* Internal error, most likely malloc */

/*
* Positive return values form a bit mask, all but the first are internal to
* the library and don't appear in results from X509_policy_check().
```

```
*/
#define X509_PCY_TREE_VALID     1 /* The policy tree is valid */
#define X509_PCY_TREE_EMPTY     2 /* The policy tree is empty */
#define X509_PCY_TREE_EXPLICIT  4 /* Explicit policy required */

int X509_policy_check(X509_POLICY_TREE **ptree, int *pexplicit_policy,
                      STACK_OF(X509)
 *certs,
                      STACK_OF(ASN1_OBJECT) *policy_oids, unsigned int flags);

void X509_policy_tree_free(X509_POLICY_TREE *tree);

int X509_policy_tree_level_count(const X509_POLICY_TREE *tree);
X509_POLICY_LEVEL *X509_policy_tree_get0_level(const X509_POLICY_TREE *tree,
                                               int i);

STACK_OF(X509_POLICY_NODE)
  *X509_policy_tree_get0_policies(const X509_POLICY_TREE *tree);

STACK_OF(X509_POLICY_NODE)
  *X509_policy_tree_get0_user_policies(const X509_POLICY_TREE *tree);

int X509_policy_level_node_count(X509_POLICY_LEVEL *level);

X509_POLICY_NODE *X509_policy_level_get0_node(const X509_POLICY_LEVEL *level,
                                              int i);

const ASN1_OBJECT *X509_policy_node_get0_policy(const X509_POLICY_NODE *node);

STACK_OF(POLICYQUALINFO)
  *X509_policy_node_get0_qualifiers(const X509_POLICY_NODE *node);
const X509_POLICY_NODE
  *X509_policy_node_get0_parent(const X509_POLICY_NODE *node);

#ifdef  __cplusplus
}
#endif
#endif
```

Copyright (c) 2011-2023 James Halliday (mail@substack.net) and Isaac Z. Schlueter (i@izs.me)

This project is free software released under the MIT license:

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES
OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
import './required-module.mjs';
ISC License

Copyright 2021 (c) npm, Inc.

Permission to use, copy, modify, and/or distribute this software for
any purpose with or without fee is hereby granted, provided that the
above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE COPYRIGHT HOLDER DISCLAIMS
ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE
COPYRIGHT HOLDER BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR
CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS
OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE
OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE
USE OR PERFORMANCE OF THIS SOFTWARE.
MIT License

Copyright (c) Marco Ippolito and Amaro contributors

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,

```
OUT
 OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
/*
* WARNING: do not edit!
* Generated by configdata.pm from Configurations/common0.tmpl, Configurations/unix-Makefile.tmpl
* via Makefile.in
*
* Copyright 2016-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#ifndef OPENSSL_CONFIGURATION_H
# define OPENSSL_CONFIGURATION_H
# pragma once

# ifdef  __cplusplus
extern "C" {
# endif

# ifdef OPENSSL_ALGORITHM_DEFINES
#  error OPENSSL_ALGORITHM_DEFINES no longer supported
# endif

/*
* OpenSSL was configured with the following options:
*/

# define OPENSSL_CONFIGURED_API 30000
# ifndef OPENSSL_RAND_SEED_OS
#  define OPENSSL_RAND_SEED_OS
# endif
# ifndef OPENSSL_THREADS
#  define OPENSSL_THREADS
# endif
# ifndef OPENSSL_NO_AFALGENG
#  define OPENSSL_NO_AFALGENG
# endif
# ifndef
 OPENSSL_NO_ASAN
#  define OPENSSL_NO_ASAN
# endif
# ifndef OPENSSL_NO_COMP
#  define OPENSSL_NO_COMP
```

```
# endif
# ifndef OPENSSL_NO_CRYPTO_MDEBUG
#  define OPENSSL_NO_CRYPTO_MDEBUG
# endif
# ifndef OPENSSL_NO_CRYPTO_MDEBUG_BACKTRACE
#  define OPENSSL_NO_CRYPTO_MDEBUG_BACKTRACE
# endif
# ifndef OPENSSL_NO_EC_NISTP_64_GCC_128
#  define OPENSSL_NO_EC_NISTP_64_GCC_128
# endif
# ifndef OPENSSL_NO_EGD
#  define OPENSSL_NO_EGD
# endif
# ifndef OPENSSL_NO_EXTERNAL_TESTS
#  define OPENSSL_NO_EXTERNAL_TESTS
# endif
# ifndef OPENSSL_NO_FUZZ_AFL
#  define OPENSSL_NO_FUZZ_AFL
# endif
# ifndef OPENSSL_NO_FUZZ_LIBFUZZER
#  define OPENSSL_NO_FUZZ_LIBFUZZER
# endif
# ifndef OPENSSL_NO_KTLS
#  define OPENSSL_NO_KTLS
# endif
# ifndef OPENSSL_NO_LOADERENG
#  define OPENSSL_NO_LOADERENG
# endif
# ifndef OPENSSL_NO_MD2
#  define OPENSSL_NO_MD2
# endif
# ifndef OPENSSL_NO_MSAN
#  define OPENSSL_NO_MSAN
# endif
# ifndef OPENSSL_NO_RC5
#  define OPENSSL_NO_RC5
# endif
# ifndef OPENSSL_NO_SCTP
#  define OPENSSL_NO_SCTP
#
 endif
# ifndef OPENSSL_NO_SSL3
#  define OPENSSL_NO_SSL3
# endif
# ifndef OPENSSL_NO_SSL3_METHOD
#  define OPENSSL_NO_SSL3_METHOD
# endif
# ifndef OPENSSL_NO_TRACE
```

```
#  define OPENSSL_NO_TRACE
# endif
# ifndef OPENSSL_NO_UBSAN
#  define OPENSSL_NO_UBSAN
# endif
# ifndef OPENSSL_NO_UNIT_TEST
#  define OPENSSL_NO_UNIT_TEST
# endif
# ifndef OPENSSL_NO_UPLINK
#  define OPENSSL_NO_UPLINK
# endif
# ifndef OPENSSL_NO_WEAK_SSL_CIPHERS
#  define OPENSSL_NO_WEAK_SSL_CIPHERS
# endif
# ifndef OPENSSL_NO_DYNAMIC_ENGINE
#  define OPENSSL_NO_DYNAMIC_ENGINE
# endif


/* Generate 80386 code? */
# undef I386_ONLY

/*
* The following are cipher-specific, but are part of the public API.
*/
# if !defined(OPENSSL_SYS_UEFI)
#  define BN_LLONG
/* Only one for the following should be defined */
#  undef SIXTY_FOUR_BIT_LONG
#  undef SIXTY_FOUR_BIT
#  define THIRTY_TWO_BIT
# endif

# define RC4_INT unsigned int

# ifdef  __cplusplus
}
# endif

#endif                          /* OPENSSL_CONFIGURATION_H
 */
```

Tests included here are based on build output generated by the six-speed benchmark suite.

Copyright (c) 2015 Kevin Decker

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in

the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN
 AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```
/*
* WARNING: do not edit!
* Generated by Makefile from providers/common/include/prov/der_dsa.h.in
*
* Copyright 2020-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#include "internal/der.h"

/* Well known OIDs precompiled */

/*
* id-dsa OBJECT IDENTIFIER ::= {
*      iso(1) member-body(2) us(840) x9-57(10040) x9algorithm(4) 1 }
*/
#define DER_OID_V_id_dsa DER_P_OBJECT, 7, 0x2A, 0x86, 0x48, 0xCE, 0x38, 0x04, 0x01
#define DER_OID_SZ_id_dsa 9
extern const unsigned char ossl_der_oid_id_dsa[DER_OID_SZ_id_dsa];

/*
* id-dsa-with-sha1 OBJECT IDENTIFIER ::=  {
*      iso(1) member-body(2) us(840) x9-57 (10040) x9algorithm(4) 3 }
*/
#define DER_OID_V_id_dsa_with_sha1 DER_P_OBJECT, 7, 0x2A, 0x86, 0x48, 0xCE, 0x38, 0x04,
 0x03
#define DER_OID_SZ_id_dsa_with_sha1 9
extern const unsigned char ossl_der_oid_id_dsa_with_sha1[DER_OID_SZ_id_dsa_with_sha1];
```

```
/*
* id-dsa-with-sha224 OBJECT IDENTIFIER ::= { sigAlgs 1 }
*/
#define DER_OID_V_id_dsa_with_sha224 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x03,
0x01
#define DER_OID_SZ_id_dsa_with_sha224 11
extern const unsigned char ossl_der_oid_id_dsa_with_sha224[DER_OID_SZ_id_dsa_with_sha224];

/*
* id-dsa-with-sha256 OBJECT IDENTIFIER ::= { sigAlgs 2 }
*/
#define DER_OID_V_id_dsa_with_sha256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x03,
0x02
#define DER_OID_SZ_id_dsa_with_sha256 11
extern const unsigned char ossl_der_oid_id_dsa_with_sha256[DER_OID_SZ_id_dsa_with_sha256];

/*
* id-dsa-with-sha384 OBJECT IDENTIFIER ::= { sigAlgs 3 }
*/
#define DER_OID_V_id_dsa_with_sha384 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x03,
0x03
#define DER_OID_SZ_id_dsa_with_sha384 11
extern const unsigned char ossl_der_oid_id_dsa_with_sha384[DER_OID_SZ_id_dsa_with_sha384];

/*
 * id-dsa-with-sha512 OBJECT IDENTIFIER ::= { sigAlgs 4 }
*/
#define DER_OID_V_id_dsa_with_sha512 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x03,
0x04
#define DER_OID_SZ_id_dsa_with_sha512 11
extern const unsigned char ossl_der_oid_id_dsa_with_sha512[DER_OID_SZ_id_dsa_with_sha512];

/*
* id-dsa-with-sha3-224 OBJECT IDENTIFIER ::= { sigAlgs 5 }
*/
#define DER_OID_V_id_dsa_with_sha3_224 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x03, 0x05
#define DER_OID_SZ_id_dsa_with_sha3_224 11
extern const unsigned char ossl_der_oid_id_dsa_with_sha3_224[DER_OID_SZ_id_dsa_with_sha3_224];

/*
* id-dsa-with-sha3-256 OBJECT IDENTIFIER ::= { sigAlgs 6 }
*/
#define DER_OID_V_id_dsa_with_sha3_256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x03, 0x06
#define DER_OID_SZ_id_dsa_with_sha3_256 11
extern const unsigned char ossl_der_oid_id_dsa_with_sha3_256[DER_OID_SZ_id_dsa_with_sha3_256];
```

```
/*
* id-dsa-with-sha3-384
 OBJECT IDENTIFIER ::= { sigAlgs 7 }
*/
#define DER_OID_V_id_dsa_with_sha3_384 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x03, 0x07
#define DER_OID_SZ_id_dsa_with_sha3_384 11
extern const unsigned char ossl_der_oid_id_dsa_with_sha3_384[DER_OID_SZ_id_dsa_with_sha3_384];

/*
* id-dsa-with-sha3-512 OBJECT IDENTIFIER ::= { sigAlgs 8 }
*/
#define DER_OID_V_id_dsa_with_sha3_512 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x03, 0x08
#define DER_OID_SZ_id_dsa_with_sha3_512 11
extern const unsigned char ossl_der_oid_id_dsa_with_sha3_512[DER_OID_SZ_id_dsa_with_sha3_512];


/* Subject Public Key Info */
int ossl_DER_w_algorithmIdentifier_DSA(WPACKET *pkt, int tag, DSA *dsa);
/* Signature */
int ossl_DER_w_algorithmIdentifier_DSA_with_MD(WPACKET *pkt, int tag,
                                               DSA *dsa, int mdnid);
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/crypto.h.in
*
* Copyright 1995-2022 The OpenSSL Project Authors. All Rights Reserved.
* Copyright (c) 2002, Oracle and/or its affiliates. All rights reserved
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_CRYPTO_H
# define OPENSSL_CRYPTO_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_CRYPTO_H
# endif
```

```
# include <stdlib.h>
# include <time.h>

# include <openssl/e_os2.h>

# ifndef OPENSSL_NO_STDIO
#  include <stdio.h>
# endif

# include <openssl/safestack.h>
# include <openssl/opensslv.h>
# include <openssl/types.h>
# include <openssl/opensslconf.h>
# include <openssl/cryptoerr.h>
# include <openssl/core.h>

# ifdef CHARSET_EBCDIC
#  include
 <openssl/ebcdic.h>
# endif

/*
* Resolve problems on some operating systems with symbol names that clash
* one way or another
*/
# include <openssl/symhacks.h>

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  include <openssl/opensslv.h>
# endif

#ifdef  __cplusplus
extern "C" {
#endif

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define SSLeay                OpenSSL_version_num
#  define SSLeay_version        OpenSSL_version
#  define SSLEAY_VERSION_NUMBER   OPENSSL_VERSION_NUMBER
#  define SSLEAY_VERSION        OPENSSL_VERSION
#  define SSLEAY_CFLAGS         OPENSSL_CFLAGS
#  define SSLEAY_BUILT_ON       OPENSSL_BUILT_ON
#  define SSLEAY_PLATFORM       OPENSSL_PLATFORM
#  define SSLEAY_DIR            OPENSSL_DIR

/*
* Old type for allocating dynamic locks. No longer used. Use the new thread
* API instead.
```

```
*/
typedef struct {
  int dummy;
} CRYPTO_dynlock;

# endif /* OPENSSL_NO_DEPRECATED_1_1_0 */

typedef void CRYPTO_RWLOCK;

CRYPTO_RWLOCK *CRYPTO_THREAD_lock_new(void);
__owur
 int CRYPTO_THREAD_read_lock(CRYPTO_RWLOCK *lock);
__owur int CRYPTO_THREAD_write_lock(CRYPTO_RWLOCK *lock);
int CRYPTO_THREAD_unlock(CRYPTO_RWLOCK *lock);
void CRYPTO_THREAD_lock_free(CRYPTO_RWLOCK *lock);

int CRYPTO_atomic_add(int *val, int amount, int *ret, CRYPTO_RWLOCK *lock);
int CRYPTO_atomic_or(uint64_t *val, uint64_t op, uint64_t *ret,
                     CRYPTO_RWLOCK *lock);
int CRYPTO_atomic_load(uint64_t *val, uint64_t *ret, CRYPTO_RWLOCK *lock);

/* No longer needed, so this is a no-op */
#define OPENSSL_malloc_init() while(0) continue

# define OPENSSL_malloc(num) \
      CRYPTO_malloc(num, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_zalloc(num) \
      CRYPTO_zalloc(num, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_realloc(addr, num) \
      CRYPTO_realloc(addr, num, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_clear_realloc(addr, old_num, num) \
      CRYPTO_clear_realloc(addr, old_num, num, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_clear_free(addr,
 num) \
      CRYPTO_clear_free(addr, num, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_free(addr) \
      CRYPTO_free(addr, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_memdup(str, s) \
      CRYPTO_memdup((str), s, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_strdup(str) \
      CRYPTO_strdup(str, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_strndup(str, n) \
      CRYPTO_strndup(str, n, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_secure_malloc(num) \
      CRYPTO_secure_malloc(num, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_secure_zalloc(num) \
      CRYPTO_secure_zalloc(num, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_secure_free(addr) \
```

```
    CRYPTO_secure_free(addr, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_secure_clear_free(addr, num) \
    CRYPTO_secure_clear_free(addr, num, OPENSSL_FILE, OPENSSL_LINE)
# define OPENSSL_secure_actual_size(ptr) \
    CRYPTO_secure_actual_size(ptr)

size_t OPENSSL_strlcpy(char *dst, const char *src, size_t siz);
size_t
 OPENSSL_strlcat(char *dst, const char *src, size_t siz);
size_t OPENSSL_strnlen(const char *str, size_t maxlen);
int OPENSSL_buf2hexstr_ex(char *str, size_t str_n, size_t *strlength,
                          const unsigned char *buf, size_t buflen,
                          const char sep);
char *OPENSSL_buf2hexstr(const unsigned char *buf, long buflen);
int OPENSSL_hexstr2buf_ex(unsigned char *buf, size_t buf_n, size_t *buflen,
                          const char *str, const char sep);
unsigned char *OPENSSL_hexstr2buf(const char *str, long *buflen);
int OPENSSL_hexchar2int(unsigned char c);
int OPENSSL_strcasecmp(const char *s1, const char *s2);
int OPENSSL_strncasecmp(const char *s1, const char *s2, size_t n);

# define OPENSSL_MALLOC_MAX_NELEMS(type)  (((1U<<(sizeof(int)*8-1))-1)/sizeof(type))

/*
* These functions return the values of OPENSSL_VERSION_MAJOR,
* OPENSSL_VERSION_MINOR, OPENSSL_VERSION_PATCH, OPENSSL_VERSION_PRE_RELEASE
* and OPENSSL_VERSION_BUILD_METADATA,
 respectively.
*/
unsigned int OPENSSL_version_major(void);
unsigned int OPENSSL_version_minor(void);
unsigned int OPENSSL_version_patch(void);
const char *OPENSSL_version_pre_release(void);
const char *OPENSSL_version_build_metadata(void);

unsigned long OpenSSL_version_num(void);
const char *OpenSSL_version(int type);
# define OPENSSL_VERSION              0
# define OPENSSL_CFLAGS               1
# define OPENSSL_BUILT_ON             2
# define OPENSSL_PLATFORM             3
# define OPENSSL_DIR                  4
# define OPENSSL_ENGINES_DIR          5
# define OPENSSL_VERSION_STRING       6
# define OPENSSL_FULL_VERSION_STRING  7
# define OPENSSL_MODULES_DIR          8
# define OPENSSL_CPU_INFO             9
```

```
const char *OPENSSL_info(int type);
/*
* The series starts at 1001 to avoid confusion with the OpenSSL_version
* types.
*/
# define OPENSSL_INFO_CONFIG_DIR              1001
# define OPENSSL_INFO_ENGINES_DIR             1002
# define OPENSSL_INFO_MODULES_DIR
            1003
# define OPENSSL_INFO_DSO_EXTENSION           1004
# define OPENSSL_INFO_DIR_FILENAME_SEPARATOR   1005
# define OPENSSL_INFO_LIST_SEPARATOR          1006
# define OPENSSL_INFO_SEED_SOURCE             1007
# define OPENSSL_INFO_CPU_SETTINGS            1008

int OPENSSL_issetugid(void);

struct crypto_ex_data_st {
  OSSL_LIB_CTX *ctx;
  STACK_OF(void) *sk;
};

SKM_DEFINE_STACK_OF_INTERNAL(void, void, void)
#define sk_void_num(sk) OPENSSL_sk_num(ossl_check_const_void_sk_type(sk))
#define sk_void_value(sk, idx) ((void *)OPENSSL_sk_value(ossl_check_const_void_sk_type(sk), (idx)))
#define sk_void_new(cmp) ((STACK_OF(void) *)OPENSSL_sk_new(ossl_check_void_compfunc_type(cmp)))
#define sk_void_new_null() ((STACK_OF(void) *)OPENSSL_sk_new_null())
#define sk_void_new_reserve(cmp, n) ((STACK_OF(void)
*)OPENSSL_sk_new_reserve(ossl_check_void_compfunc_type(cmp), (n)))
#define sk_void_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_void_sk_type(sk), (n))
#define
 sk_void_free(sk) OPENSSL_sk_free(ossl_check_void_sk_type(sk))
#define sk_void_zero(sk) OPENSSL_sk_zero(ossl_check_void_sk_type(sk))
#define sk_void_delete(sk, i) ((void *)OPENSSL_sk_delete(ossl_check_void_sk_type(sk), (i)))
#define sk_void_delete_ptr(sk, ptr) ((void *)OPENSSL_sk_delete_ptr(ossl_check_void_sk_type(sk),
ossl_check_void_type(ptr)))
#define sk_void_push(sk, ptr) OPENSSL_sk_push(ossl_check_void_sk_type(sk), ossl_check_void_type(ptr))
#define sk_void_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_void_sk_type(sk), ossl_check_void_type(ptr))
#define sk_void_pop(sk) ((void *)OPENSSL_sk_pop(ossl_check_void_sk_type(sk)))
#define sk_void_shift(sk) ((void *)OPENSSL_sk_shift(ossl_check_void_sk_type(sk)))
#define sk_void_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_void_sk_type(sk),ossl_check_void_freefunc_type(freefunc))
#define sk_void_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_void_sk_type(sk), ossl_check_void_type(ptr),
(idx))
#define sk_void_set(sk, idx, ptr) ((void
 *)OPENSSL_sk_set(ossl_check_void_sk_type(sk), (idx), ossl_check_void_type(ptr)))
#define sk_void_find(sk, ptr) OPENSSL_sk_find(ossl_check_void_sk_type(sk), ossl_check_void_type(ptr))
#define sk_void_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_void_sk_type(sk), ossl_check_void_type(ptr))
```

```
#define sk_void_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_void_sk_type(sk),
ossl_check_void_type(ptr), pnum)
#define sk_void_sort(sk) OPENSSL_sk_sort(ossl_check_void_sk_type(sk))
#define sk_void_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_void_sk_type(sk))
#define sk_void_dup(sk) ((STACK_OF(void) *)OPENSSL_sk_dup(ossl_check_const_void_sk_type(sk)))
#define sk_void_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(void)
*)OPENSSL_sk_deep_copy(ossl_check_const_void_sk_type(sk), ossl_check_void_copyfunc_type(copyfunc),
ossl_check_void_freefunc_type(freefunc)))
#define sk_void_set_cmp_func(sk, cmp)
((sk_void_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_void_sk_type(sk),
ossl_check_void_compfunc_type(cmp)))



/*
 * Per class, we have a STACK of function pointers.
*/
# define CRYPTO_EX_INDEX_SSL            0
# define CRYPTO_EX_INDEX_SSL_CTX        1
# define CRYPTO_EX_INDEX_SSL_SESSION    2
# define CRYPTO_EX_INDEX_X509           3
# define CRYPTO_EX_INDEX_X509_STORE     4
# define CRYPTO_EX_INDEX_X509_STORE_CTX 5
# define CRYPTO_EX_INDEX_DH             6
# define CRYPTO_EX_INDEX_DSA            7
# define CRYPTO_EX_INDEX_EC_KEY         8
# define CRYPTO_EX_INDEX_RSA            9
# define CRYPTO_EX_INDEX_ENGINE         10
# define CRYPTO_EX_INDEX_UI             11
# define CRYPTO_EX_INDEX_BIO            12
# define CRYPTO_EX_INDEX_APP            13
# define CRYPTO_EX_INDEX_UI_METHOD      14
# define CRYPTO_EX_INDEX_RAND_DRBG      15
# define CRYPTO_EX_INDEX_DRBG           CRYPTO_EX_INDEX_RAND_DRBG
# define CRYPTO_EX_INDEX_OSSL_LIB_CTX   16
# define CRYPTO_EX_INDEX_EVP_PKEY       17
# define CRYPTO_EX_INDEX__COUNT         18

typedef void
 CRYPTO_EX_new (void *parent, void *ptr, CRYPTO_EX_DATA *ad,
                int idx, long argl, void *argp);
typedef void CRYPTO_EX_free (void *parent, void *ptr, CRYPTO_EX_DATA *ad,
                 int idx, long argl, void *argp);
typedef int CRYPTO_EX_dup (CRYPTO_EX_DATA *to, const CRYPTO_EX_DATA *from,
                void **from_d, int idx, long argl, void *argp);
__owur int CRYPTO_get_ex_new_index(int class_index, long argl, void *argp,
                           CRYPTO_EX_new *new_func,
                           CRYPTO_EX_dup *dup_func,
```

```
                            CRYPTO_EX_free *free_func);
/* No longer use an index. */
int CRYPTO_free_ex_index(int class_index, int idx);

/*
* Initialise/duplicate/free CRYPTO_EX_DATA variables corresponding to a
* given class (invokes whatever per-class callbacks are applicable)
*/
int CRYPTO_new_ex_data(int class_index, void *obj, CRYPTO_EX_DATA *ad);
int CRYPTO_dup_ex_data(int class_index,
 CRYPTO_EX_DATA *to,
                 const CRYPTO_EX_DATA *from);

void CRYPTO_free_ex_data(int class_index, void *obj, CRYPTO_EX_DATA *ad);

/* Allocate a single item in the CRYPTO_EX_DATA variable */
int CRYPTO_alloc_ex_data(int class_index, void *obj, CRYPTO_EX_DATA *ad,
                   int idx);

/*
* Get/set data in a CRYPTO_EX_DATA variable corresponding to a particular
* index (relative to the class type involved)
*/
int CRYPTO_set_ex_data(CRYPTO_EX_DATA *ad, int idx, void *val);
void *CRYPTO_get_ex_data(const CRYPTO_EX_DATA *ad, int idx);

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
/*
* This function cleans up all "ex_data" state. It mustn't be called under
* potential race-conditions.
*/
# define CRYPTO_cleanup_all_ex_data() while(0) continue

/*
* The old locking functions have been removed completely without compatibility
* macros. This is because the old functions either could not properly report
* errors, or the returned error values were not clearly
 documented.
* Replacing the locking functions with no-ops would cause race condition
* issues in the affected applications. It is far better for them to fail at
* compile time.
* On the other hand, the locking callbacks are no longer used.  Consequently,
* the callback management functions can be safely replaced with no-op macros.
*/
#  define CRYPTO_num_locks()            (1)
#  define CRYPTO_set_locking_callback(func)
#  define CRYPTO_get_locking_callback()         (NULL)
#  define CRYPTO_set_add_lock_callback(func)
```

```
# define CRYPTO_get_add_lock_callback()       (NULL)

/*
* These defines where used in combination with the old locking callbacks,
* they are not called anymore, but old code that's not called might still
* use them.
*/
# define CRYPTO_LOCK            1
# define CRYPTO_UNLOCK          2
# define CRYPTO_READ            4
# define CRYPTO_WRITE           8

/* This structure is no longer used */
typedef struct crypto_threadid_st {
  int dummy;
}
 CRYPTO_THREADID;
/* Only use CRYPTO_THREADID_set_[numeric|pointer]() within callbacks */
# define CRYPTO_THREADID_set_numeric(id, val)
# define CRYPTO_THREADID_set_pointer(id, ptr)
# define CRYPTO_THREADID_set_callback(threadid_func)   (0)
# define CRYPTO_THREADID_get_callback()               (NULL)
# define CRYPTO_THREADID_current(id)
# define CRYPTO_THREADID_cmp(a, b)                    (-1)
# define CRYPTO_THREADID_cpy(dest, src)
# define CRYPTO_THREADID_hash(id)                     (0UL)

# ifndef OPENSSL_NO_DEPRECATED_1_0_0
#  define CRYPTO_set_id_callback(func)
#  define CRYPTO_get_id_callback()                    (NULL)
#  define CRYPTO_thread_id()                          (0UL)
# endif /* OPENSSL_NO_DEPRECATED_1_0_0 */

# define CRYPTO_set_dynlock_create_callback(dyn_create_function)
# define CRYPTO_set_dynlock_lock_callback(dyn_lock_function)
# define CRYPTO_set_dynlock_destroy_callback(dyn_destroy_function)
# define CRYPTO_get_dynlock_create_callback()
      (NULL)
# define CRYPTO_get_dynlock_lock_callback()           (NULL)
# define CRYPTO_get_dynlock_destroy_callback()        (NULL)
# endif /* OPENSSL_NO_DEPRECATED_1_1_0 */

typedef void *(*CRYPTO_malloc_fn)(size_t num, const char *file, int line);
typedef void *(*CRYPTO_realloc_fn)(void *addr, size_t num, const char *file,
                                   int line);
typedef void (*CRYPTO_free_fn)(void *addr, const char *file, int line);
int CRYPTO_set_mem_functions(CRYPTO_malloc_fn malloc_fn,
                             CRYPTO_realloc_fn realloc_fn,
```

```
                        CRYPTO_free_fn free_fn);
void CRYPTO_get_mem_functions(CRYPTO_malloc_fn *malloc_fn,
                        CRYPTO_realloc_fn *realloc_fn,
                        CRYPTO_free_fn *free_fn);

void *CRYPTO_malloc(size_t num, const char *file, int line);
void *CRYPTO_zalloc(size_t num, const char *file, int line);
void *CRYPTO_memdup(const void *str, size_t siz, const char *file, int line);
char
 *CRYPTO_strdup(const char *str, const char *file, int line);
char *CRYPTO_strndup(const char *str, size_t s, const char *file, int line);
void CRYPTO_free(void *ptr, const char *file, int line);
void CRYPTO_clear_free(void *ptr, size_t num, const char *file, int line);
void *CRYPTO_realloc(void *addr, size_t num, const char *file, int line);
void *CRYPTO_clear_realloc(void *addr, size_t old_num, size_t num,
                        const char *file, int line);

int CRYPTO_secure_malloc_init(size_t sz, size_t minsize);
int CRYPTO_secure_malloc_done(void);
void *CRYPTO_secure_malloc(size_t num, const char *file, int line);
void *CRYPTO_secure_zalloc(size_t num, const char *file, int line);
void CRYPTO_secure_free(void *ptr, const char *file, int line);
void CRYPTO_secure_clear_free(void *ptr, size_t num,
                        const char *file, int line);
int CRYPTO_secure_allocated(const void *ptr);
int CRYPTO_secure_malloc_initialized(void);
size_t CRYPTO_secure_actual_size(void
 *ptr);
size_t CRYPTO_secure_used(void);

void OPENSSL_cleanse(void *ptr, size_t len);

# ifndef OPENSSL_NO_CRYPTO_MDEBUG
/*
* The following can be used to detect memory leaks in the library. If
* used, it turns on malloc checking
*/
# define CRYPTO_MEM_CHECK_OFF     0x0   /* Control only */
# define CRYPTO_MEM_CHECK_ON      0x1   /* Control and mode bit */
# define CRYPTO_MEM_CHECK_ENABLE  0x2   /* Control and mode bit */
# define CRYPTO_MEM_CHECK_DISABLE 0x3   /* Control only */

void CRYPTO_get_alloc_counts(int *mcount, int *rcount, int *fcount);
#  ifndef OPENSSL_NO_DEPRECATED_3_0
#    define OPENSSL_mem_debug_push(info) \
       CRYPTO_mem_debug_push(info, OPENSSL_FILE, OPENSSL_LINE)
#    define OPENSSL_mem_debug_pop() \
       CRYPTO_mem_debug_pop()
```

```
#  endif
#  ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 int CRYPTO_set_mem_debug(int flag);
OSSL_DEPRECATEDIN_3_0 int CRYPTO_mem_ctrl(int mode);
OSSL_DEPRECATEDIN_3_0 int CRYPTO_mem_debug_push(const char *info,
                                const char *file, int line);
OSSL_DEPRECATEDIN_3_0 int CRYPTO_mem_debug_pop(void);
OSSL_DEPRECATEDIN_3_0 void CRYPTO_mem_debug_malloc(void *addr, size_t num,
                                 int flag,
                                 const char *file, int line);
OSSL_DEPRECATEDIN_3_0 void CRYPTO_mem_debug_realloc(void *addr1, void *addr2,
                                  size_t num, int flag,
                                  const char *file, int line);
OSSL_DEPRECATEDIN_3_0 void CRYPTO_mem_debug_free(void *addr, int flag,
                                const char *file, int line);
OSSL_DEPRECATEDIN_3_0
int CRYPTO_mem_leaks_cb(int (*cb)(const char *str, size_t len, void *u),
                void *u);
#  endif
#  ifndef OPENSSL_NO_STDIO
#  ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 int CRYPTO_mem_leaks_fp(FILE *);
#  endif
#
 endif
# ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 int CRYPTO_mem_leaks(BIO *bio);
# endif
# endif /* OPENSSL_NO_CRYPTO_MDEBUG */

/* die if we have to */
ossl_noreturn void OPENSSL_die(const char *assertion, const char *file, int line);
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define OpenSSLDie(f,l,a) OPENSSL_die((a),(f),(l))
# endif
# define OPENSSL_assert(e) \
   (void)((e) ? 0 : (OPENSSL_die("assertion failed: " #e, OPENSSL_FILE, OPENSSL_LINE), 1))

int OPENSSL_isservice(void);

void OPENSSL_init(void);
# ifdef OPENSSL_SYS_UNIX
#  ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 void OPENSSL_fork_prepare(void);
OSSL_DEPRECATEDIN_3_0 void OPENSSL_fork_parent(void);
OSSL_DEPRECATEDIN_3_0 void OPENSSL_fork_child(void);
#  endif
# endif
```

```
struct tm *OPENSSL_gmtime(const time_t *timer, struct tm *result);
int OPENSSL_gmtime_adj(struct tm *tm, int offset_day, long offset_sec);
int OPENSSL_gmtime_diff(int *pday, int *psec,
                        const struct tm *from, const
 struct tm *to);

/*
* CRYPTO_memcmp returns zero iff the |len| bytes at |a| and |b| are equal.
* It takes an amount of time dependent on |len|, but independent of the
* contents of |a| and |b|. Unlike memcmp, it cannot be used to put elements
* into a defined order as the return value when a != b is undefined, other
* than to be non-zero.
*/
int CRYPTO_memcmp(const void * in_a, const void * in_b, size_t len);

/* Standard initialisation options */
# define OPENSSL_INIT_NO_LOAD_CRYPTO_STRINGS 0x00000001L
# define OPENSSL_INIT_LOAD_CRYPTO_STRINGS    0x00000002L
# define OPENSSL_INIT_ADD_ALL_CIPHERS        0x00000004L
# define OPENSSL_INIT_ADD_ALL_DIGESTS        0x00000008L
# define OPENSSL_INIT_NO_ADD_ALL_CIPHERS     0x00000010L
# define OPENSSL_INIT_NO_ADD_ALL_DIGESTS     0x00000020L
# define OPENSSL_INIT_LOAD_CONFIG            0x00000040L
# define OPENSSL_INIT_NO_LOAD_CONFIG         0x00000080L
# define OPENSSL_INIT_ASYNC                  0x00000100L
# define OPENSSL_INIT_ENGINE_RDRAND
        0x00000200L
# define OPENSSL_INIT_ENGINE_DYNAMIC         0x00000400L
# define OPENSSL_INIT_ENGINE_OPENSSL         0x00000800L
# define OPENSSL_INIT_ENGINE_CRYPTODEV       0x00001000L
# define OPENSSL_INIT_ENGINE_CAPI            0x00002000L
# define OPENSSL_INIT_ENGINE_PADLOCK         0x00004000L
# define OPENSSL_INIT_ENGINE_AFALG           0x00008000L
/* FREE:                                    0x00010000L */
# define OPENSSL_INIT_ATFORK                 0x00020000L
/* OPENSSL_INIT_BASE_ONLY                   0x00040000L */
# define OPENSSL_INIT_NO_ATEXIT              0x00080000L
/* OPENSSL_INIT flag range 0x03f00000 reserved for OPENSSL_init_ssl() */
/* FREE: 0x04000000L */
/* FREE: 0x08000000L */
/* FREE: 0x10000000L */
/* FREE: 0x20000000L */
/* FREE: 0x40000000L */
/* FREE: 0x80000000L */
/* Max OPENSSL_INIT flag value is 0x80000000 */

/* openssl and dasync not counted as builtin */
```

```
# define OPENSSL_INIT_ENGINE_ALL_BUILTIN \
  (OPENSSL_INIT_ENGINE_RDRAND | OPENSSL_INIT_ENGINE_DYNAMIC
 \
  | OPENSSL_INIT_ENGINE_CRYPTODEV | OPENSSL_INIT_ENGINE_CAPI | \
  OPENSSL_INIT_ENGINE_PADLOCK)

/* Library initialisation functions */
void OPENSSL_cleanup(void);
int OPENSSL_init_crypto(uint64_t opts, const OPENSSL_INIT_SETTINGS *settings);
int OPENSSL_atexit(void (*handler)(void));
void OPENSSL_thread_stop(void);
void OPENSSL_thread_stop_ex(OSSL_LIB_CTX *ctx);

/* Low-level control of initialization */
OPENSSL_INIT_SETTINGS *OPENSSL_INIT_new(void);
# ifndef OPENSSL_NO_STDIO
int OPENSSL_INIT_set_config_filename(OPENSSL_INIT_SETTINGS *settings,
                             const char *config_filename);
void OPENSSL_INIT_set_config_file_flags(OPENSSL_INIT_SETTINGS *settings,
                               unsigned long flags);
int OPENSSL_INIT_set_config_appname(OPENSSL_INIT_SETTINGS *settings,
                            const char *config_appname);
# endif
void OPENSSL_INIT_free(OPENSSL_INIT_SETTINGS *settings);

# if defined(OPENSSL_THREADS)
 && !defined(CRYPTO_TDEBUG)
#  if defined(_WIN32)
#   if defined(BASETYPES) || defined(_WINDEF_H)
/* application has to include <windows.h> in order to use this */
typedef DWORD CRYPTO_THREAD_LOCAL;
typedef DWORD CRYPTO_THREAD_ID;

typedef LONG CRYPTO_ONCE;
#    define CRYPTO_ONCE_STATIC_INIT 0
#   endif
#  else
#   if defined(__TANDEM) && defined(_SPT_MODEL_)
#    define  SPT_THREAD_SIGNAL 1
#    define  SPT_THREAD_AWARE 1
#    include <spthread.h>
#   else
#    include <pthread.h>
#   endif
typedef pthread_once_t CRYPTO_ONCE;
typedef pthread_key_t CRYPTO_THREAD_LOCAL;
typedef pthread_t CRYPTO_THREAD_ID;
```

```
#   define CRYPTO_ONCE_STATIC_INIT PTHREAD_ONCE_INIT
#  endif
# endif

# if !defined(CRYPTO_ONCE_STATIC_INIT)
typedef unsigned int CRYPTO_ONCE;
typedef unsigned int CRYPTO_THREAD_LOCAL;
typedef unsigned int CRYPTO_THREAD_ID;
#  define CRYPTO_ONCE_STATIC_INIT 0
# endif

int CRYPTO_THREAD_run_once(CRYPTO_ONCE *once, void (*init)(void));

int CRYPTO_THREAD_init_local(CRYPTO_THREAD_LOCAL
 *key, void (*cleanup)(void *));
void *CRYPTO_THREAD_get_local(CRYPTO_THREAD_LOCAL *key);
int CRYPTO_THREAD_set_local(CRYPTO_THREAD_LOCAL *key, void *val);
int CRYPTO_THREAD_cleanup_local(CRYPTO_THREAD_LOCAL *key);

CRYPTO_THREAD_ID CRYPTO_THREAD_get_current_id(void);
int CRYPTO_THREAD_compare_id(CRYPTO_THREAD_ID a, CRYPTO_THREAD_ID b);

OSSL_LIB_CTX *OSSL_LIB_CTX_new(void);
OSSL_LIB_CTX *OSSL_LIB_CTX_new_from_dispatch(const OSSL_CORE_HANDLE *handle,
                                             const OSSL_DISPATCH *in);
OSSL_LIB_CTX *OSSL_LIB_CTX_new_child(const OSSL_CORE_HANDLE *handle,
                                     const OSSL_DISPATCH *in);
int OSSL_LIB_CTX_load_config(OSSL_LIB_CTX *ctx, const char *config_file);
void OSSL_LIB_CTX_free(OSSL_LIB_CTX *);
OSSL_LIB_CTX *OSSL_LIB_CTX_get0_global_default(void);
OSSL_LIB_CTX *OSSL_LIB_CTX_set0_default(OSSL_LIB_CTX *libctx);

# ifdef  __cplusplus
}
# endif
#endif
```

This software is copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software; you can redistribute it and/or modify it under
the same terms as the Perl 5 programming language system itself.

Terms of the Perl programming language system itself

a) the GNU General Public License as published by the Free
  Software Foundation; either version 1, or (at your option) any
  later version, or
b) the "Artistic License"

--- The GNU General Public License, Version 1, February 1989 ---

This software is Copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software, licensed under:

The GNU General Public License, Version 1, February 1989

GNU GENERAL PUBLIC LICENSE
Version 1, February 1989

Copyright (C) 1989 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of a such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must tell them their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this General Public License and to the absence of any warranty; and give any other recipients of the Program a copy of this General Public License along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

a) cause the modified files to carry prominent notices stating that you changed the files and the date of any change; and

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when

run, you must cause it, when started running for such interactive use
in the simplest and most usual way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this General Public License.

d) You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 1 and 2 above provided that you also do one of the following:

a) accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

4. You may not copy, modify, sublicense, distribute or transfer the Program except as expressly provided under this General Public License.

Any attempt otherwise to copy, modify, sublicense, distribute or transfer the Program is void, and will automatically terminate your rights to use the Program under this License. However, parties who have received copies, or rights to use copies, from you under this General Public License will not have their licenses terminated so long as such parties remain in full compliance.

5. By copying, distributing or modifying the Program (or any work based on the Program) you indicate your acceptance of this license to do so, and all its terms and conditions.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein.

7. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of the license which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the license, you may choose any version ever published by the Free Software Foundation.

8. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

9. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS

TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

10. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to humanity, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so,
attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) 19yy <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free
Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

  Gnomovision version 69, Copyright (C) 19xx name of author
  Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
  This is free software, and you are welcome to redistribute it
  under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the
appropriate parts of the General Public License. Of course, the
commands you use may be called something other than `show w' and `show
c'; they could even be mouse-clicks or menu items--whatever suits your
program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here a sample; alter
 the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the
 program `Gnomovision' (a program to direct compilers to make passes
 at assemblers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

That's all there is to it!

--- The Artistic License 1.0 ---

This software is Copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software, licensed under:

 The Artistic License 1.0

The Artistic License

Preamble

The intent of this document is to state the conditions under which a Package
may be copied, such that the Copyright Holder maintains some semblance of
artistic control over the development of the package, while giving the users of
the package the right to use and distribute the Package in a more-or-less

customary fashion, plus the right to make reasonable modifications.

Definitions:

- "Package" refers to the collection of files distributed by the Copyright Holder, and derivatives of that collection of files created through textual modification.
- "Standard Version" refers to such a Package if it has not been modified, or has been modified in accordance with the wishes of the Copyright Holder.
- "Copyright Holder" is whoever is named in the copyright or copyrights for the package.
- "You" is you, if you're thinking about copying or distributing this Package.
- "Reasonable copying fee" is whatever you can justify on the basis of media cost, duplication charges, time of people involved, and so on. (You will not be required to justify it to the Copyright Holder, but only to the computing community at large as a market that must bear the fee.)
- "Freely Available" means that no fee is charged for the item itself, though there may be fees involved in handling the item. It also means that recipients of the item may redistribute it under the same conditions they received it.

1. You may make and give away verbatim copies of the source form of the Standard Version of this Package without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers.

2. You may apply bug fixes, portability fixes and other modifications derived from the Public Domain or from the Copyright Holder. A Package modified in such a way shall still be considered the Standard Version.

3. You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed that file, and provided that you do at least ONE of the following:

a) place your modifications in the Public Domain or otherwise make them Freely Available, such as by posting said modifications to Usenet or an equivalent medium, or placing the modifications on a major archive site such as ftp.uu.net, or by allowing the Copyright Holder to include your modifications in the Standard Version of the Package.

b) use the modified Package only within your corporation or organization.

c) rename any non-standard executables so the names do not conflict with standard executables, which must also be provided, and provide a separate manual page for each non-standard executable that clearly documents how it

differs from the Standard Version.

d) make other distribution arrangements with the Copyright Holder.

4. You may distribute the programs of this Package in object code or executable form, provided that you do at least ONE of the following:

a) distribute a Standard Version of the executables and library files, together with instructions (in the manual page or equivalent) on where to get the Standard Version.

b) accompany the distribution with the machine-readable source of the Package with your modifications.

c) accompany any non-standard executables with their corresponding Standard Version executables, giving the non-standard executables non-standard names,
and clearly documenting the differences in manual pages (or equivalent), together with instructions on where to get the Standard Version.

d) make other distribution arrangements with the Copyright Holder.

5. You may charge a reasonable copying fee for any distribution of this Package. You may charge any fee you choose for support of this Package. You may not charge a fee for this Package itself. However, you may distribute this Package in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution provided that you do not advertise this Package as a product of your own.

6. The scripts and library files supplied as input to or produced as output from the programs of this Package do not automatically fall under the copyright of this Package, but belong to whomever generated them, and may be sold commercially, and may be aggregated with this Package.

7. C or perl subroutines supplied by you and linked into this Package shall not
be considered part of this Package.

8. The name of the Copyright Holder may not be used to endorse or promote products derived from this software without specific prior written permission.

9. THIS PACKAGE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTIBILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

The ISC License

Copyright (c) Isaac Z. Schlueter, Kat Marchn, npm, Inc., and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
Minizlib was created by Isaac Z. Schlueter.
It is a derivative work of the Node.js project.

"""
Copyright Isaac Z. Schlueter and Contributors
Copyright Node.js contributors. All rights reserved.
Copyright Joyent, Inc. and other Node contributors. All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR
 PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""
```
{
 'variables': {
   'openssl_sources': [
     'openssl/ssl/bio_ssl.c',
     'openssl/ssl/d1_lib.c',
     'openssl/ssl/d1_msg.c',
```

'openssl/ssl/d1_srtp.c',
'openssl/ssl/methods.c',
'openssl/ssl/pqueue.c',
'openssl/ssl/s3_enc.c',
'openssl/ssl/s3_lib.c',
'openssl/ssl/s3_msg.c',
'openssl/ssl/ssl_asn1.c',
'openssl/ssl/ssl_cert.c',
'openssl/ssl/ssl_ciph.c',
'openssl/ssl/ssl_conf.c',
'openssl/ssl/ssl_err.c',
'openssl/ssl/ssl_err_legacy.c',
'openssl/ssl/ssl_init.c',
'openssl/ssl/ssl_lib.c',
'openssl/ssl/ssl_mcnf.c',
'openssl/ssl/ssl_rsa.c',
'openssl/ssl/ssl_rsa_legacy.c',
'openssl/ssl/ssl_sess.c',
'openssl/ssl/ssl_stat.c',
'openssl/ssl/ssl_txt.c',
'openssl/ssl/ssl_utst.c',
'openssl/ssl/t1_enc.c',
'openssl/ssl/t1_lib.c',
'openssl/ssl/t1_trce.c',
'openssl/ssl/tls13_enc.c',
'openssl/ssl/tls_depr.c',
'openssl/ssl/tls_srp.c',
'openssl/ssl/record/dtls1_bitmap.c',
'openssl/ssl/record/rec_layer_d1.c',
'openssl/ssl/record/rec_layer_s3.c',
'openssl/ssl/record/ssl3_buffer.c',
'openssl/ssl/record/ssl3_record.c',
'openssl/ssl/record/ssl3_record_tls13.c',
'openssl/ssl/statem/extensions.c',
'openssl/ssl/statem/extensions_clnt.c',
'openssl/ssl/statem/extensions_cust.c',
'openssl/ssl/statem/extensions_srvr.c',
'openssl/ssl/statem/statem.c',
'openssl/ssl/statem/statem_clnt.c',
'openssl/ssl/statem/statem_dtls.c',
'openssl/ssl/statem/statem_lib.c',
'openssl/ssl/statem/statem_srvr.c',
'openssl/crypto/aes/aes_cbc.c',
'openssl/crypto/aes/aes_cfb.c',
'openssl/crypto/aes/aes_core.c',
'openssl/crypto/aes/aes_ecb.c',
'openssl/crypto/aes/aes_ige.c',
'openssl/crypto/aes/aes_misc.c',

'openssl/crypto/aes/aes_ofb.c',
'openssl/crypto/aes/aes_wrap.c',
'openssl/crypto/aria/aria.c',
'openssl/crypto/asn1/a_bitstr.c',
'openssl/crypto/asn1/a_d2i_fp.c',
'openssl/crypto/asn1/a_digest.c',
'openssl/crypto/asn1/a_dup.c',
'openssl/crypto/asn1/a_gentm.c',
'openssl/crypto/asn1/a_i2d_fp.c',
'openssl/crypto/asn1/a_int.c',
'openssl/crypto/asn1/a_mbstr.c',
'openssl/crypto/asn1/a_object.c',
'openssl/crypto/asn1/a_octet.c',
'openssl/crypto/asn1/a_print.c',
'openssl/crypto/asn1/a_sign.c',
'openssl/crypto/asn1/a_strex.c',
'openssl/crypto/asn1/a_strnid.c',
'openssl/crypto/asn1/a_time.c',
'openssl/crypto/asn1/a_type.c',
'openssl/crypto/asn1/a_utctm.c',
'openssl/crypto/asn1/a_utf8.c',
'openssl/crypto/asn1/a_verify.c',
'openssl/crypto/asn1/ameth_lib.c',
'openssl/crypto/asn1/asn1_err.c',
'openssl/crypto/asn1/asn1_gen.c',
'openssl/crypto/asn1/asn1_item_list.c',
'openssl/crypto/asn1/asn1_lib.c',
'openssl/crypto/asn1/asn1_parse.c',
'openssl/crypto/asn1/asn_mime.c',
'openssl/crypto/asn1/asn_moid.c',
'openssl/crypto/asn1/asn_mstbl.c',
'openssl/crypto/asn1/asn_pack.c',
'openssl/crypto/asn1/bio_asn1.c',
'openssl/crypto/asn1/bio_ndef.c',
'openssl/crypto/asn1/d2i_param.c',
'openssl/crypto/asn1/d2i_pr.c',
'openssl/crypto/asn1/d2i_pu.c',
'openssl/crypto/asn1/evp_asn1.c',
'openssl/crypto/asn1/f_int.c',
'openssl/crypto/asn1/f_string.c',
'openssl/crypto/asn1/i2d_evp.c',
'openssl/crypto/asn1/n_pkey.c',
'openssl/crypto/asn1/nsseq.c',
'openssl/crypto/asn1/p5_pbe.c',
'openssl/crypto/asn1/p5_pbev2.c',
'openssl/crypto/asn1/p5_scrypt.c',
'openssl/crypto/asn1/p8_pkey.c',
'openssl/crypto/asn1/t_bitst.c',

'openssl/crypto/asn1/t_pkey.c',
'openssl/crypto/asn1/t_spki.c',
'openssl/crypto/asn1/tasn_dec.c',
'openssl/crypto/asn1/tasn_enc.c',
'openssl/crypto/asn1/tasn_fre.c',
'openssl/crypto/asn1/tasn_new.c',
'openssl/crypto/asn1/tasn_prn.c',
'openssl/crypto/asn1/tasn_scn.c',
'openssl/crypto/asn1/tasn_typ.c',
'openssl/crypto/asn1/tasn_utl.c',
'openssl/crypto/asn1/x_algor.c',
'openssl/crypto/asn1/x_bignum.c',
'openssl/crypto/asn1/x_info.c',
'openssl/crypto/asn1/x_int64.c',
'openssl/crypto/asn1/x_long.c',
'openssl/crypto/asn1/x_pkey.c',
'openssl/crypto/asn1/x_sig.c',
'openssl/crypto/asn1/x_spki.c',
'openssl/crypto/asn1/x_val.c',
'openssl/crypto/async/arch/async_null.c',
'openssl/crypto/async/arch/async_posix.c',
'openssl/crypto/async/arch/async_win.c',
'openssl/crypto/async/async.c',
'openssl/crypto/async/async_err.c',
'openssl/crypto/async/async_wait.c',
'openssl/crypto/bf/bf_cfb64.c',
'openssl/crypto/bf/bf_ecb.c',
'openssl/crypto/bf/bf_enc.c',
'openssl/crypto/bf/bf_ofb64.c',
'openssl/crypto/bf/bf_skey.c',
'openssl/crypto/bio/bf_buff.c',
'openssl/crypto/bio/bf_lbuf.c',
'openssl/crypto/bio/bf_nbio.c',
'openssl/crypto/bio/bf_null.c',
'openssl/crypto/bio/bf_prefix.c',
'openssl/crypto/bio/bf_readbuff.c',
'openssl/crypto/bio/bio_addr.c',
'openssl/crypto/bio/bio_cb.c',
'openssl/crypto/bio/bio_dump.c',
'openssl/crypto/bio/bio_err.c',
'openssl/crypto/bio/bio_lib.c',
'openssl/crypto/bio/bio_meth.c',
'openssl/crypto/bio/bio_print.c',
'openssl/crypto/bio/bio_sock.c',
'openssl/crypto/bio/bio_sock2.c',
'openssl/crypto/bio/bss_acpt.c',
'openssl/crypto/bio/bss_bio.c',
'openssl/crypto/bio/bss_conn.c',

'openssl/crypto/bio/bss_core.c',
'openssl/crypto/bio/bss_dgram.c',
'openssl/crypto/bio/bss_fd.c',
'openssl/crypto/bio/bss_file.c',
'openssl/crypto/bio/bss_log.c',
'openssl/crypto/bio/bss_mem.c',
'openssl/crypto/bio/bss_null.c',
'openssl/crypto/bio/bss_sock.c',
'openssl/crypto/bio/ossl_core_bio.c',

'openssl/crypto/bn/bn_add.c',
'openssl/crypto/bn/bn_asm.c',
'openssl/crypto/bn/bn_blind.c',
'openssl/crypto/bn/bn_const.c',
'openssl/crypto/bn/bn_conv.c',
'openssl/crypto/bn/bn_ctx.c',
'openssl/crypto/bn/bn_depr.c',
'openssl/crypto/bn/bn_dh.c',
'openssl/crypto/bn/bn_div.c',
'openssl/crypto/bn/bn_err.c',
'openssl/crypto/bn/bn_exp.c',
'openssl/crypto/bn/bn_exp2.c',
'openssl/crypto/bn/bn_gcd.c',
'openssl/crypto/bn/bn_gf2m.c',
'openssl/crypto/bn/bn_intern.c',
'openssl/crypto/bn/bn_kron.c',
'openssl/crypto/bn/bn_lib.c',
'openssl/crypto/bn/bn_mod.c',
'openssl/crypto/bn/bn_mont.c',
'openssl/crypto/bn/bn_mpi.c',
'openssl/crypto/bn/bn_mul.c',
'openssl/crypto/bn/bn_nist.c',
'openssl/crypto/bn/bn_prime.c',
'openssl/crypto/bn/bn_print.c',
'openssl/crypto/bn/bn_rand.c',
'openssl/crypto/bn/bn_recp.c',
'openssl/crypto/bn/bn_rsa_fips186_4.c',

'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_srp.c',
'openssl/crypto/bn/bn_word.c',
'openssl/crypto/bn/bn_x931p.c',
'openssl/crypto/buffer/buf_err.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/camellia/camellia.c',
'openssl/crypto/camellia/cmll_cbc.c',

'openssl/crypto/camellia/cmll_cfb.c',
'openssl/crypto/camellia/cmll_ctr.c',
'openssl/crypto/camellia/cmll_ecb.c',
'openssl/crypto/camellia/cmll_misc.c',
'openssl/crypto/camellia/cmll_ofb.c',
'openssl/crypto/cast/c_cfb64.c',
'openssl/crypto/cast/c_ecb.c',
'openssl/crypto/cast/c_enc.c',
'openssl/crypto/cast/c_ofb64.c',
'openssl/crypto/cast/c_skey.c',
'openssl/crypto/chacha/chacha_enc.c',
'openssl/crypto/cmac/cmac.c',
'openssl/crypto/cmp/cmp_asn.c',
'openssl/crypto/cmp/cmp_client.c',
'openssl/crypto/cmp/cmp_ctx.c',

'openssl/crypto/cmp/cmp_err.c',
'openssl/crypto/cmp/cmp_hdr.c',
'openssl/crypto/cmp/cmp_http.c',
'openssl/crypto/cmp/cmp_msg.c',
'openssl/crypto/cmp/cmp_protect.c',
'openssl/crypto/cmp/cmp_server.c',
'openssl/crypto/cmp/cmp_status.c',
'openssl/crypto/cmp/cmp_util.c',
'openssl/crypto/cmp/cmp_vfy.c',
'openssl/crypto/cms/cms_asn1.c',
'openssl/crypto/cms/cms_att.c',
'openssl/crypto/cms/cms_cd.c',
'openssl/crypto/cms/cms_dd.c',
'openssl/crypto/cms/cms_dh.c',
'openssl/crypto/cms/cms_ec.c',
'openssl/crypto/cms/cms_enc.c',
'openssl/crypto/cms/cms_env.c',
'openssl/crypto/cms/cms_err.c',
'openssl/crypto/cms/cms_ess.c',
'openssl/crypto/cms/cms_io.c',
'openssl/crypto/cms/cms_kari.c',
'openssl/crypto/cms/cms_lib.c',
'openssl/crypto/cms/cms_pwri.c',
'openssl/crypto/cms/cms_rsa.c',
'openssl/crypto/cms/cms_sd.c',
'openssl/crypto/cms/cms_smime.c',

'openssl/crypto/conf/conf_api.c',
'openssl/crypto/conf/conf_def.c',
'openssl/crypto/conf/conf_err.c',
'openssl/crypto/conf/conf_lib.c',
'openssl/crypto/conf/conf_mall.c',

'openssl/crypto/conf/conf_mod.c',
'openssl/crypto/conf/conf_sap.c',
'openssl/crypto/conf/conf_ssl.c',
'openssl/crypto/crmf/crmf_asn.c',
'openssl/crypto/crmf/crmf_err.c',
'openssl/crypto/crmf/crmf_lib.c',
'openssl/crypto/crmf/crmf_pbm.c',
'openssl/crypto/ct/ct_b64.c',
'openssl/crypto/ct/ct_err.c',
'openssl/crypto/ct/ct_log.c',
'openssl/crypto/ct/ct_oct.c',
'openssl/crypto/ct/ct_policy.c',
'openssl/crypto/ct/ct_prn.c',
'openssl/crypto/ct/ct_sct.c',
'openssl/crypto/ct/ct_sct_ctx.c',
'openssl/crypto/ct/ct_vfy.c',
'openssl/crypto/ct/ct_x509v3.c',
'openssl/crypto/des/cbc_cksm.c',
'openssl/crypto/des/cbc_enc.c',
'openssl/crypto/des/cfb64ede.c',
'openssl/crypto/des/cfb64enc.c',
'openssl/crypto/des/cfb_enc.c',
'openssl/crypto/des/des_enc.c',
'openssl/crypto/des/ecb3_enc.c',
'openssl/crypto/des/ecb_enc.c',
'openssl/crypto/des/fcrypt.c',
'openssl/crypto/des/fcrypt_b.c',
'openssl/crypto/des/ofb64ede.c',
'openssl/crypto/des/ofb64enc.c',
'openssl/crypto/des/ofb_enc.c',
'openssl/crypto/des/pcbc_enc.c',
'openssl/crypto/des/qud_cksm.c',
'openssl/crypto/des/rand_key.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/des/str2key.c',
'openssl/crypto/des/xcbc_enc.c',
'openssl/crypto/dh/dh_ameth.c',
'openssl/crypto/dh/dh_asn1.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_depr.c',
'openssl/crypto/dh/dh_err.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',

'openssl/crypto/dh/dh_meth.c',
'openssl/crypto/dh/dh_pmeth.c',
'openssl/crypto/dh/dh_prn.c',
'openssl/crypto/dh/dh_rfc5114.c',
'openssl/crypto/dsa/dsa_ameth.c',
'openssl/crypto/dsa/dsa_asn1.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_depr.c',
'openssl/crypto/dsa/dsa_err.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_meth.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_pmeth.c',
'openssl/crypto/dsa/dsa_prn.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/dso/dso_dl.c',
'openssl/crypto/dso/dso_dlfcn.c',
'openssl/crypto/dso/dso_err.c',
'openssl/crypto/dso/dso_lib.c',
'openssl/crypto/dso/dso_openssl.c',
'openssl/crypto/dso/dso_vms.c',
'openssl/crypto/dso/dso_win32.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_ameth.c',
'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_deprecated.c',
'openssl/crypto/ec/ec_err.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',

'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ec_pmeth.c',
'openssl/crypto/ec/ec_print.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/eck_prn.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/ec/ecx_meth.c',
'openssl/crypto/encode_decode/decoder_err.c',
'openssl/crypto/encode_decode/decoder_lib.c',
'openssl/crypto/encode_decode/decoder_meth.c',
'openssl/crypto/encode_decode/decoder_pkey.c',
'openssl/crypto/encode_decode/encoder_err.c',
'openssl/crypto/encode_decode/encoder_lib.c',
'openssl/crypto/encode_decode/encoder_meth.c',
'openssl/crypto/encode_decode/encoder_pkey.c',
'openssl/crypto/engine/eng_all.c',
'openssl/crypto/engine/eng_cnf.c',
'openssl/crypto/engine/eng_ctrl.c',
'openssl/crypto/engine/eng_dyn.c',
'openssl/crypto/engine/eng_err.c',
'openssl/crypto/engine/eng_fat.c',
'openssl/crypto/engine/eng_init.c',
'openssl/crypto/engine/eng_lib.c',
'openssl/crypto/engine/eng_list.c',
'openssl/crypto/engine/eng_openssl.c',
'openssl/crypto/engine/eng_pkey.c',
'openssl/crypto/engine/eng_rdrand.c',
'openssl/crypto/engine/eng_table.c',
'openssl/crypto/engine/tb_asnmth.c',
'openssl/crypto/engine/tb_cipher.c',
'openssl/crypto/engine/tb_dh.c',
'openssl/crypto/engine/tb_digest.c',
'openssl/crypto/engine/tb_dsa.c',
'openssl/crypto/engine/tb_eckey.c',
'openssl/crypto/engine/tb_pkmeth.c',
'openssl/crypto/engine/tb_rand.c',
'openssl/crypto/engine/tb_rsa.c',
'openssl/crypto/err/err.c',
'openssl/crypto/err/err_all.c',

'openssl/crypto/err/err_all_legacy.c',
'openssl/crypto/err/err_blocks.c',
'openssl/crypto/err/err_prn.c',
'openssl/crypto/ess/ess_asn1.c',
'openssl/crypto/ess/ess_err.c',
'openssl/crypto/ess/ess_lib.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/bio_b64.c',
'openssl/crypto/evp/bio_enc.c',
'openssl/crypto/evp/bio_md.c',
'openssl/crypto/evp/bio_ok.c',
'openssl/crypto/evp/c_allc.c',
'openssl/crypto/evp/c_alld.c',
'openssl/crypto/evp/cmeth_lib.c',
'openssl/crypto/evp/ctrl_params_translate.c',
'openssl/crypto/evp/dh_ctrl.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/dsa_ctrl.c',
'openssl/crypto/evp/e_aes.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha1.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha256.c',
'openssl/crypto/evp/e_aria.c',
'openssl/crypto/evp/e_bf.c',
'openssl/crypto/evp/e_camellia.c',
'openssl/crypto/evp/e_cast.c',
'openssl/crypto/evp/e_chacha20_poly1305.c',
'openssl/crypto/evp/e_des.c',
'openssl/crypto/evp/e_des3.c',
'openssl/crypto/evp/e_idea.c',
'openssl/crypto/evp/e_null.c',
'openssl/crypto/evp/e_old.c',
'openssl/crypto/evp/e_rc2.c',
'openssl/crypto/evp/e_rc4.c',
'openssl/crypto/evp/e_rc4_hmac_md5.c',
'openssl/crypto/evp/e_rc5.c',
'openssl/crypto/evp/e_seed.c',
'openssl/crypto/evp/e_sm4.c',
'openssl/crypto/evp/e_xcbc_d.c',
'openssl/crypto/evp/ec_ctrl.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/encode.c',
'openssl/crypto/evp/evp_cnf.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_err.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_key.c',
'openssl/crypto/evp/evp_lib.c',

'openssl/crypto/evp/evp_pbe.c',
'openssl/crypto/evp/evp_pkey.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/legacy_blake2.c',
'openssl/crypto/evp/legacy_md4.c',
'openssl/crypto/evp/legacy_md5.c',
'openssl/crypto/evp/legacy_md5_sha1.c',
'openssl/crypto/evp/legacy_mdc2.c',
'openssl/crypto/evp/legacy_ripemd.c',
'openssl/crypto/evp/legacy_sha.c',
'openssl/crypto/evp/legacy_wp.c',
'openssl/crypto/evp/m_null.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/names.c',
'openssl/crypto/evp/p5_crpt.c',
'openssl/crypto/evp/p5_crpt2.c',
'openssl/crypto/evp/p_dec.c',
'openssl/crypto/evp/p_enc.c',
'openssl/crypto/evp/p_legacy.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/p_open.c',
'openssl/crypto/evp/p_seal.c',
'openssl/crypto/evp/p_sign.c',
'openssl/crypto/evp/p_verify.c',
'openssl/crypto/evp/pbe_scrypt.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/http/http_client.c',
'openssl/crypto/http/http_err.c',

'openssl/crypto/http/http_lib.c',
'openssl/crypto/idea/i_cbc.c',
'openssl/crypto/idea/i_cfb64.c',
'openssl/crypto/idea/i_ecb.c',
'openssl/crypto/idea/i_ofb64.c',
'openssl/crypto/idea/i_skey.c',
'openssl/crypto/kdf/kdf_err.c',
'openssl/crypto/lhash/lh_stats.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpt_err.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/cversion.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ebcdic.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/getenv.c',
'openssl/crypto/info.c',
'openssl/crypto/init.c',
'openssl/crypto/initthread.c',
'openssl/crypto/mem.c',
'openssl/crypto/mem_clr.c',
'openssl/crypto/mem_sec.c',
'openssl/crypto/o_dir.c',
'openssl/crypto/o_fopen.c',
'openssl/crypto/o_init.c',
'openssl/crypto/o_str.c',
'openssl/crypto/o_time.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/passphrase.c',
'openssl/crypto/provider.c',
'openssl/crypto/provider_child.c',
'openssl/crypto/provider_conf.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/punycode.c',

'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/trace.c',
'openssl/crypto/uid.c',
'openssl/crypto/md4/md4_dgst.c',
'openssl/crypto/md4/md4_one.c',
'openssl/crypto/md5/md5_dgst.c',
'openssl/crypto/md5/md5_one.c',
'openssl/crypto/md5/md5_sha1.c',
'openssl/crypto/mdc2/mdc2_one.c',
'openssl/crypto/mdc2/mdc2dgst.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/cts128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ocb128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/siv128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/objects/o_names.c',
'openssl/crypto/objects/obj_dat.c',
'openssl/crypto/objects/obj_err.c',
'openssl/crypto/objects/obj_lib.c',
'openssl/crypto/objects/obj_xref.c',
'openssl/crypto/ocsp/ocsp_asn.c',
'openssl/crypto/ocsp/ocsp_cl.c',
'openssl/crypto/ocsp/ocsp_err.c',
'openssl/crypto/ocsp/ocsp_ext.c',
'openssl/crypto/ocsp/ocsp_http.c',
'openssl/crypto/ocsp/ocsp_lib.c',
'openssl/crypto/ocsp/ocsp_prn.c',
'openssl/crypto/ocsp/ocsp_srv.c',
'openssl/crypto/ocsp/ocsp_vfy.c',
'openssl/crypto/ocsp/v3_ocsp.c',
'openssl/crypto/pem/pem_all.c',
'openssl/crypto/pem/pem_err.c',
'openssl/crypto/pem/pem_info.c',
'openssl/crypto/pem/pem_lib.c',
'openssl/crypto/pem/pem_oth.c',
'openssl/crypto/pem/pem_pk8.c',
'openssl/crypto/pem/pem_pkey.c',

'openssl/crypto/pem/pem_sign.c',
'openssl/crypto/pem/pem_x509.c',
'openssl/crypto/pem/pem_xaux.c',
'openssl/crypto/pem/pvkfmt.c',
'openssl/crypto/pkcs12/p12_add.c',
'openssl/crypto/pkcs12/p12_asn.c',
'openssl/crypto/pkcs12/p12_attr.c',
'openssl/crypto/pkcs12/p12_crpt.c',
'openssl/crypto/pkcs12/p12_crt.c',
'openssl/crypto/pkcs12/p12_decr.c',
'openssl/crypto/pkcs12/p12_init.c',
'openssl/crypto/pkcs12/p12_key.c',
'openssl/crypto/pkcs12/p12_kiss.c',
'openssl/crypto/pkcs12/p12_mutl.c',
'openssl/crypto/pkcs12/p12_npas.c',
'openssl/crypto/pkcs12/p12_p8d.c',
'openssl/crypto/pkcs12/p12_p8e.c',
'openssl/crypto/pkcs12/p12_sbag.c',
'openssl/crypto/pkcs12/p12_utl.c',
'openssl/crypto/pkcs12/pk12err.c',
'openssl/crypto/pkcs7/bio_pk7.c',
'openssl/crypto/pkcs7/pk7_asn1.c',
'openssl/crypto/pkcs7/pk7_attr.c',
'openssl/crypto/pkcs7/pk7_doit.c',
'openssl/crypto/pkcs7/pk7_lib.c',
'openssl/crypto/pkcs7/pk7_mime.c',
'openssl/crypto/pkcs7/pk7_smime.c',
'openssl/crypto/pkcs7/pkcs7err.c',
'openssl/crypto/poly1305/poly1305.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_err.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/prov_seed.c',
'openssl/crypto/rand/rand_deprecated.c',
'openssl/crypto/rand/rand_err.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rand/rand_meth.c',
'openssl/crypto/rand/rand_pool.c',
'openssl/crypto/rand/randfile.c',
'openssl/crypto/rc2/rc2_cbc.c',
'openssl/crypto/rc2/rc2_ecb.c',
'openssl/crypto/rc2/rc2_skey.c',
'openssl/crypto/rc2/rc2cfb64.c',
'openssl/crypto/rc2/rc2ofb64.c',
'openssl/crypto/rc4/rc4_enc.c',

'openssl/crypto/rc4/rc4_skey.c',
'openssl/crypto/ripemd/rmd_dgst.c',
'openssl/crypto/ripemd/rmd_one.c',
'openssl/crypto/rsa/rsa_ameth.c',
'openssl/crypto/rsa/rsa_asn1.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_depr.c',
'openssl/crypto/rsa/rsa_err.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_meth.c',
'openssl/crypto/rsa/rsa_mp.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',

'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pmeth.c',
'openssl/crypto/rsa/rsa_prn.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_saos.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/rsa/rsa_x931g.c',
'openssl/crypto/seed/seed.c',
'openssl/crypto/seed/seed_cbc.c',
'openssl/crypto/seed/seed_cfb.c',
'openssl/crypto/seed/seed_ecb.c',
'openssl/crypto/seed/seed_ofb.c',
'openssl/crypto/sha/keccak1600.c',
'openssl/crypto/sha/sha1_one.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/siphash/siphash.c',
'openssl/crypto/sm2/sm2_crypt.c',
'openssl/crypto/sm2/sm2_err.c',
'openssl/crypto/sm2/sm2_key.c',
'openssl/crypto/sm2/sm2_sign.c',
'openssl/crypto/sm3/legacy_sm3.c',
'openssl/crypto/sm3/sm3.c',

'openssl/crypto/sm4/sm4.c',
'openssl/crypto/srp/srp_lib.c',
'openssl/crypto/srp/srp_vfy.c',
'openssl/crypto/stack/stack.c',
'openssl/crypto/store/store_err.c',
'openssl/crypto/store/store_init.c',
'openssl/crypto/store/store_lib.c',
'openssl/crypto/store/store_meth.c',
'openssl/crypto/store/store_register.c',
'openssl/crypto/store/store_result.c',
'openssl/crypto/store/store_strings.c',
'openssl/crypto/ts/ts_asn1.c',
'openssl/crypto/ts/ts_conf.c',
'openssl/crypto/ts/ts_err.c',
'openssl/crypto/ts/ts_lib.c',
'openssl/crypto/ts/ts_req_print.c',
'openssl/crypto/ts/ts_req_utils.c',
'openssl/crypto/ts/ts_rsp_print.c',
'openssl/crypto/ts/ts_rsp_sign.c',
'openssl/crypto/ts/ts_rsp_utils.c',
'openssl/crypto/ts/ts_rsp_verify.c',
'openssl/crypto/ts/ts_verify_ctx.c',
'openssl/crypto/txt_db/txt_db.c',
'openssl/crypto/ui/ui_err.c',
'openssl/crypto/ui/ui_lib.c',
'openssl/crypto/ui/ui_null.c',
'openssl/crypto/ui/ui_openssl.c',
'openssl/crypto/ui/ui_util.c',
'openssl/crypto/whrlpool/wp_block.c',
'openssl/crypto/whrlpool/wp_dgst.c',
'openssl/crypto/x509/by_dir.c',
'openssl/crypto/x509/by_file.c',
'openssl/crypto/x509/by_store.c',
'openssl/crypto/x509/pcy_cache.c',
'openssl/crypto/x509/pcy_data.c',
'openssl/crypto/x509/pcy_lib.c',
'openssl/crypto/x509/pcy_map.c',
'openssl/crypto/x509/pcy_node.c',
'openssl/crypto/x509/pcy_tree.c',
'openssl/crypto/x509/t_crl.c',
'openssl/crypto/x509/t_req.c',
'openssl/crypto/x509/t_x509.c',
'openssl/crypto/x509/v3_addr.c',
'openssl/crypto/x509/v3_admis.c',
'openssl/crypto/x509/v3_akeya.c',
'openssl/crypto/x509/v3_akid.c',
'openssl/crypto/x509/v3_asid.c',
'openssl/crypto/x509/v3_bcons.c',

'openssl/crypto/x509/v3_bitst.c',
'openssl/crypto/x509/v3_conf.c',
'openssl/crypto/x509/v3_cpols.c',
'openssl/crypto/x509/v3_crld.c',
'openssl/crypto/x509/v3_enum.c',
'openssl/crypto/x509/v3_extku.c',
'openssl/crypto/x509/v3_genn.c',
'openssl/crypto/x509/v3_ia5.c',
'openssl/crypto/x509/v3_info.c',
'openssl/crypto/x509/v3_int.c',
'openssl/crypto/x509/v3_ist.c',
'openssl/crypto/x509/v3_lib.c',
'openssl/crypto/x509/v3_ncons.c',
'openssl/crypto/x509/v3_pci.c',
'openssl/crypto/x509/v3_pcia.c',
'openssl/crypto/x509/v3_pcons.c',
'openssl/crypto/x509/v3_pku.c',
'openssl/crypto/x509/v3_pmaps.c',
'openssl/crypto/x509/v3_prn.c',
'openssl/crypto/x509/v3_purp.c',
'openssl/crypto/x509/v3_san.c',
'openssl/crypto/x509/v3_skid.c',
'openssl/crypto/x509/v3_sxnet.c',
'openssl/crypto/x509/v3_tlsf.c',
'openssl/crypto/x509/v3_utf8.c',
'openssl/crypto/x509/v3_utl.c',
'openssl/crypto/x509/v3err.c',
'openssl/crypto/x509/x509_att.c',
'openssl/crypto/x509/x509_cmp.c',
'openssl/crypto/x509/x509_d2.c',
'openssl/crypto/x509/x509_def.c',
'openssl/crypto/x509/x509_err.c',
'openssl/crypto/x509/x509_ext.c',
'openssl/crypto/x509/x509_lu.c',
'openssl/crypto/x509/x509_meth.c',
'openssl/crypto/x509/x509_obj.c',
'openssl/crypto/x509/x509_r2x.c',
'openssl/crypto/x509/x509_req.c',
'openssl/crypto/x509/x509_set.c',
'openssl/crypto/x509/x509_trust.c',
'openssl/crypto/x509/x509_txt.c',
'openssl/crypto/x509/x509_v3.c',
'openssl/crypto/x509/x509_vfy.c',
'openssl/crypto/x509/x509_vpm.c',
'openssl/crypto/x509/x509cset.c',
'openssl/crypto/x509/x509name.c',
'openssl/crypto/x509/x509rset.c',
'openssl/crypto/x509/x509spki.c',

'openssl/crypto/x509/x509type.c',
'openssl/crypto/x509/x_all.c',
'openssl/crypto/x509/x_attrib.c',
'openssl/crypto/x509/x_crl.c',
'openssl/crypto/x509/x_exten.c',
'openssl/crypto/x509/x_name.c',
'openssl/crypto/x509/x_pubkey.c',
'openssl/crypto/x509/x_req.c',
'openssl/crypto/x509/x_x509.c',
'openssl/crypto/x509/x_x509a.c',
'openssl/engines/e_capi.c',
'openssl/engines/e_devcrypto.c',
'openssl/engines/e_padlock.c',
'openssl/providers/baseprov.c',
'openssl/providers/defltprov.c',
'openssl/providers/nullprov.c',
'openssl/providers/prov_running.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/der/der_sm2_key.c',
'openssl/providers/common/der/der_sm2_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_default.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/asymciphers/sm2_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm.c',

'openssl/providers/implementations/ciphers/cipher_aria_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_hw.c',
'openssl/providers/implementations/ciphers/cipher_camellia.c',
'openssl/providers/implementations/ciphers/cipher_camellia_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_null.c',
'openssl/providers/implementations/ciphers/cipher_sm4.c',
'openssl/providers/implementations/ciphers/cipher_sm4_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',

'openssl/providers/implementations/ciphers/cipher_tdes_wrap.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap_hw.c',
'openssl/providers/implementations/digests/blake2_prov.c',
'openssl/providers/implementations/digests/blake2b_prov.c',
'openssl/providers/implementations/digests/blake2s_prov.c',
'openssl/providers/implementations/digests/md5_prov.c',
'openssl/providers/implementations/digests/md5_sha1_prov.c',
'openssl/providers/implementations/digests/null_prov.c',
'openssl/providers/implementations/digests/ripemd_prov.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/digests/sm3_prov.c',
'openssl/providers/implementations/encode_decode/decode_der2key.c',
'openssl/providers/implementations/encode_decode/decode_epki2pki.c',
'openssl/providers/implementations/encode_decode/decode_msblob2key.c',
'openssl/providers/implementations/encode_decode/decode_pem2der.c',
'openssl/providers/implementations/encode_decode/decode_pvk2key.c',
'openssl/providers/implementations/encode_decode/decode_spki2typespki.c',
'openssl/providers/implementations/encode_decode/encode_key2any.c',
'openssl/providers/implementations/encode_decode/encode_key2blob.c',
'openssl/providers/implementations/encode_decode/encode_key2ms.c',
'openssl/providers/implementations/encode_decode/encode_key2text.c',
'openssl/providers/implementations/encode_decode/endecoder_common.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',

'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/krb5kdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/pkcs12kdf.c',
'openssl/providers/implementations/kdfs/scrypt.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/blake2b_mac.c',
'openssl/providers/implementations/macs/blake2s_mac.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/macs/poly1305_prov.c',
'openssl/providers/implementations/macs/siphash_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/seed_src.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/rands/seeding/rand_cpu_x86.c',
'openssl/providers/implementations/rands/seeding/rand_tsc.c',
'openssl/providers/implementations/rands/seeding/rand_unix.c',
'openssl/providers/implementations/rands/seeding/rand_win.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',
'openssl/providers/implementations/signature/sm2_sig.c',
'openssl/providers/implementations/storemgmt/file_store.c',
'openssl/providers/implementations/storemgmt/file_store_any2obj.c',
'openssl/ssl/s3_cbc.c',
'openssl/providers/common/der/der_dsa_key.c',
'openssl/providers/common/der/der_dsa_sig.c',

```
  'openssl/providers/common/der/der_ec_key.c',
  'openssl/providers/common/der/der_ec_sig.c',
  'openssl/providers/common/der/der_ecx_key.c',
   'openssl/providers/common/der/der_rsa_key.c',
  'openssl/providers/common/provider_ctx.c',
  'openssl/providers/common/provider_err.c',
  'openssl/providers/implementations/ciphers/ciphercommon.c',
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish_hw.c',
  'openssl/providers/implementations/ciphers/cipher_cast5.c',
  'openssl/providers/implementations/ciphers/cipher_cast5_hw.c',
   'openssl/providers/implementations/ciphers/cipher_des.c',
  'openssl/providers/implementations/ciphers/cipher_des_hw.c',
  'openssl/providers/implementations/ciphers/cipher_desx.c',
  'openssl/providers/implementations/ciphers/cipher_desx_hw.c',
  'openssl/providers/implementations/ciphers/cipher_idea.c',
  'openssl/providers/implementations/ciphers/cipher_idea_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc2.c',
  'openssl/providers/implementations/ciphers/cipher_rc2_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hw.c',
  'openssl/providers/implementations/ciphers/cipher_seed.c',
  'openssl/providers/implementations/ciphers/cipher_seed_hw.c',
  'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
   'openssl/providers/implementations/digests/md4_prov.c',
  'openssl/providers/implementations/digests/mdc2_prov.c',
  'openssl/providers/implementations/digests/ripemd_prov.c',
  'openssl/providers/implementations/digests/wp_prov.c',
  'openssl/providers/implementations/kdfs/pbkdf1.c',
  'openssl/providers/prov_running.c',
  'openssl/providers/legacyprov.c',
],
'openssl_sources_BSD-x86': [
  './config/archs/BSD-x86/no-asm/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_ecx_gen.c',
```

```
    './config/archs/BSD-x86/no-asm/providers/common/der/der_rsa_gen.c',
    './config/archs/BSD-x86/no-asm/providers/common/der/der_wrap_gen.c',

 './config/archs/BSD-x86/no-asm/providers/legacy.ld',
    './config/archs/BSD-x86/no-asm/providers/fips.ld',
  ],
  'openssl_defines_BSD-x86': [
    'NDEBUG',
    'L_ENDIAN',
    'OPENSSL_BUILDING_OPENSSL',
    'OPENSSL_PIC',
  ],
  'openssl_cflags_BSD-x86': [
    '-Wall -O3 -fomit-frame-pointer',
    '-pthread',
    '-Wall -O3 -fomit-frame-pointer',
  ],
  'openssl_ex_libs_BSD-x86': [
    '-pthread',
  ],
 },
 'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86)'],
 'cflags' : ['<@(openssl_cflags_BSD-x86)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86)'],
 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86)'],
 },
}
```

The MIT License (MIT)

Copyright (c) 2013-2017 Josh Glazebrook

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
The MIT License (MIT)

Copyright (c) 2016 Thomas Watson Steen

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
(The MIT License)

Copyright (c) 2011 TJ Holowaychuk <tj@vision-media.ca>

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
'Software'), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED 'AS IS', WITHOUT WARRANTY OF ANY KIND,

EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
MIT License

Copyright (c) 1998 Massachusetts Institute of Technology
Copyright (c) 2007 - 2023 Daniel Stenberg with many contributors, see AUTHORS
file.

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice (including the next
paragraph) shall be included in all copies or substantial portions of the
Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS
BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
ISC License:

Copyright (c) 2023 by GitHub Inc.

Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
{
'variables': {

```
'openssl_defines_BSD-x86': [
  'NDEBUG',
  'L_ENDIAN',
  'OPENSSL_BUILDING_OPENSSL',
  'OPENSSL_PIC',
],
'openssl_cflags_BSD-x86': [
  '-Wall -O3 -fomit-frame-pointer',
  '-pthread',
  '-Wall -O3 -fomit-frame-pointer',
],
'openssl_ex_libs_BSD-x86': [
  '-pthread',
],
'openssl_cli_srcs_BSD-x86': [
  'openssl/apps/lib/cmp_mock_srv.c',
  'openssl/apps/asn1parse.c',
  'openssl/apps/ca.c',
  'openssl/apps/ciphers.c',
  'openssl/apps/cmp.c',
  'openssl/apps/cms.c',
  'openssl/apps/crl.c',
  'openssl/apps/crl2pkcs7.c',
  'openssl/apps/dgst.c',
  'openssl/apps/dhparam.c',
  'openssl/apps/dsa.c',
  'openssl/apps/dsaparam.c',
  'openssl/apps/ec.c',
  'openssl/apps/ecparam.c',
  'openssl/apps/enc.c',
  'openssl/apps/engine.c',
  'openssl/apps/errstr.c',
  'openssl/apps/fipsinstall.c',
  'openssl/apps/gendsa.c',
  'openssl/apps/genpkey.c',

  'openssl/apps/genrsa.c',
  'openssl/apps/info.c',
  'openssl/apps/kdf.c',
  'openssl/apps/list.c',
  'openssl/apps/mac.c',
  'openssl/apps/nseq.c',
  'openssl/apps/ocsp.c',
  'openssl/apps/openssl.c',
  'openssl/apps/passwd.c',
  'openssl/apps/pkcs12.c',
  'openssl/apps/pkcs7.c',
  'openssl/apps/pkcs8.c',
```

```
    'openssl/apps/pkey.c',
    'openssl/apps/pkeyparam.c',
    'openssl/apps/pkeyutl.c',
    'openssl/apps/prime.c',
    './config/archs/BSD-x86/no-asm/apps/progs.c',
    'openssl/apps/rand.c',
    'openssl/apps/rehash.c',
    'openssl/apps/req.c',
    'openssl/apps/rsa.c',
    'openssl/apps/rsautl.c',
    'openssl/apps/s_client.c',
    'openssl/apps/s_server.c',
    'openssl/apps/s_time.c',
    'openssl/apps/sess_id.c',
    'openssl/apps/smime.c',
    'openssl/apps/speed.c',
    'openssl/apps/spkac.c',
    'openssl/apps/srp.c',
    'openssl/apps/storeutl.c',
    'openssl/apps/ts.c',
    'openssl/apps/verify.c',
     'openssl/apps/version.c',
    'openssl/apps/x509.c',
    'openssl/apps/lib/app_libctx.c',
    'openssl/apps/lib/app_params.c',
    'openssl/apps/lib/app_provider.c',
    'openssl/apps/lib/app_rand.c',
    'openssl/apps/lib/app_x509.c',
    'openssl/apps/lib/apps.c',
    'openssl/apps/lib/apps_ui.c',
    'openssl/apps/lib/columns.c',
    'openssl/apps/lib/engine.c',
    'openssl/apps/lib/engine_loader.c',
    'openssl/apps/lib/fmt.c',
    'openssl/apps/lib/http_server.c',
    'openssl/apps/lib/names.c',
    'openssl/apps/lib/opt.c',
    'openssl/apps/lib/s_cb.c',
    'openssl/apps/lib/s_socket.c',
    'openssl/apps/lib/tlssrp_depr.c',
  ],
},
'defines': ['<@(openssl_defines_BSD-x86)'],
'include_dirs': [
  './include',
],
'cflags' : ['<@(openssl_cflags_BSD-x86)'],
'libraries': ['<@(openssl_ex_libs_BSD-x86)'],
```

'sources': ['<@(openssl_cli_srcs_BSD-x86)'],
}
Copyright (c) Robert Kowalski and Isaac Z. Schlueter ("Authors")
All rights reserved.

The BSD License

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHORS AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHORS OR CONTRIBUTORS
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT
OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE
OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN
IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
/*
* WARNING: do not edit!
* Generated by Makefile from providers/common/include/prov/der_digests.h.in
*
* Copyright 2020-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#include "internal/der.h"

/* Well known OIDs precompiled */

/*
* sigAlgs OBJECT IDENTIFIER ::= { nistAlgorithms 3 }

```
*/
#define DER_OID_V_sigAlgs DER_P_OBJECT, 8, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x03
#define DER_OID_SZ_sigAlgs 10
extern const unsigned char ossl_der_oid_sigAlgs[DER_OID_SZ_sigAlgs];

/*
* id-sha1  OBJECT IDENTIFIER  ::=  { iso(1)
*                  identified-organization(3) oiw(14)
*                  secsig(3) algorithms(2) 26 }
*/
#define DER_OID_V_id_sha1 DER_P_OBJECT, 5, 0x2B, 0x0E, 0x03, 0x02, 0x1A
#define DER_OID_SZ_id_sha1
 7
extern const unsigned char ossl_der_oid_id_sha1[DER_OID_SZ_id_sha1];

/*
* id-md2  OBJECT IDENTIFIER ::= {
*   iso(1) member-body(2) us(840) rsadsi(113549) digestAlgorithm(2) 2 }
*/
#define DER_OID_V_id_md2 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x02, 0x02
#define DER_OID_SZ_id_md2 10
extern const unsigned char ossl_der_oid_id_md2[DER_OID_SZ_id_md2];

/*
* id-md5  OBJECT IDENTIFIER ::= {
*   iso(1) member-body(2) us(840) rsadsi(113549) digestAlgorithm(2) 5 }
*/
#define DER_OID_V_id_md5 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x02, 0x05
#define DER_OID_SZ_id_md5 10
extern const unsigned char ossl_der_oid_id_md5[DER_OID_SZ_id_md5];

/*
* id-sha256 OBJECT IDENTIFIER ::= { hashAlgs 1 }
*/
#define DER_OID_V_id_sha256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x01
#define DER_OID_SZ_id_sha256 11
extern const unsigned char ossl_der_oid_id_sha256[DER_OID_SZ_id_sha256];

/*
* id-sha384 OBJECT IDENTIFIER ::= { hashAlgs
 2 }
*/
#define DER_OID_V_id_sha384 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x02
#define DER_OID_SZ_id_sha384 11
extern const unsigned char ossl_der_oid_id_sha384[DER_OID_SZ_id_sha384];

/*
* id-sha512 OBJECT IDENTIFIER ::= { hashAlgs 3 }
```

```
*/
#define DER_OID_V_id_sha512 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x03
#define DER_OID_SZ_id_sha512 11
extern const unsigned char ossl_der_oid_id_sha512[DER_OID_SZ_id_sha512];

/*
* id-sha224 OBJECT IDENTIFIER ::= { hashAlgs 4 }
*/
#define DER_OID_V_id_sha224 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x04
#define DER_OID_SZ_id_sha224 11
extern const unsigned char ossl_der_oid_id_sha224[DER_OID_SZ_id_sha224];

/*
* id-sha512-224 OBJECT IDENTIFIER ::= { hashAlgs 5 }
*/
#define DER_OID_V_id_sha512_224 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x05
#define DER_OID_SZ_id_sha512_224 11
extern const unsigned char ossl_der_oid_id_sha512_224[DER_OID_SZ_id_sha512_224];

/*
 * id-sha512-256 OBJECT IDENTIFIER ::= { hashAlgs 6 }
*/
#define DER_OID_V_id_sha512_256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x06
#define DER_OID_SZ_id_sha512_256 11
extern const unsigned char ossl_der_oid_id_sha512_256[DER_OID_SZ_id_sha512_256];

/*
* id-sha3-224 OBJECT IDENTIFIER ::= { hashAlgs 7 }
*/
#define DER_OID_V_id_sha3_224 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x07
#define DER_OID_SZ_id_sha3_224 11
extern const unsigned char ossl_der_oid_id_sha3_224[DER_OID_SZ_id_sha3_224];

/*
* id-sha3-256 OBJECT IDENTIFIER ::= { hashAlgs 8 }
*/
#define DER_OID_V_id_sha3_256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x08
#define DER_OID_SZ_id_sha3_256 11
extern const unsigned char ossl_der_oid_id_sha3_256[DER_OID_SZ_id_sha3_256];

/*
* id-sha3-384 OBJECT IDENTIFIER ::= { hashAlgs 9 }
*/
#define DER_OID_V_id_sha3_384 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x09
#define
 DER_OID_SZ_id_sha3_384 11
extern const unsigned char ossl_der_oid_id_sha3_384[DER_OID_SZ_id_sha3_384];
```

```
/*
* id-sha3-512 OBJECT IDENTIFIER ::= { hashAlgs 10 }
*/
#define DER_OID_V_id_sha3_512 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x0A
#define DER_OID_SZ_id_sha3_512 11
extern const unsigned char ossl_der_oid_id_sha3_512[DER_OID_SZ_id_sha3_512];

/*
* id-shake128 OBJECT IDENTIFIER ::= { hashAlgs 11 }
*/
#define DER_OID_V_id_shake128 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x0B
#define DER_OID_SZ_id_shake128 11
extern const unsigned char ossl_der_oid_id_shake128[DER_OID_SZ_id_shake128];

/*
* id-shake256 OBJECT IDENTIFIER ::= { hashAlgs 12 }
*/
#define DER_OID_V_id_shake256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x0C
#define DER_OID_SZ_id_shake256 11
extern const unsigned char ossl_der_oid_id_shake256[DER_OID_SZ_id_shake256];

/*
* id-shake128-len OBJECT IDENTIFIER ::= { hashAlgs 17 }
*/
#define DER_OID_V_id_shake128_len
 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x11
#define DER_OID_SZ_id_shake128_len 11
extern const unsigned char ossl_der_oid_id_shake128_len[DER_OID_SZ_id_shake128_len];

/*
* id-shake256-len OBJECT IDENTIFIER ::= { hashAlgs 18 }
*/
#define DER_OID_V_id_shake256_len DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02,
0x12
#define DER_OID_SZ_id_shake256_len 11
extern const unsigned char ossl_der_oid_id_shake256_len[DER_OID_SZ_id_shake256_len];

/*
* id-KMACWithSHAKE128 OBJECT IDENTIFIER ::={hashAlgs 19}
*/
#define DER_OID_V_id_KMACWithSHAKE128 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x02, 0x13
#define DER_OID_SZ_id_KMACWithSHAKE128 11
extern const unsigned char ossl_der_oid_id_KMACWithSHAKE128[DER_OID_SZ_id_KMACWithSHAKE128];

/*
* id-KMACWithSHAKE256 OBJECT IDENTIFIER ::={ hashAlgs 20}
*/
```

#define DER_OID_V_id_KMACWithSHAKE256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02, 0x14
#define
DER_OID_SZ_id_KMACWithSHAKE256 11
extern const unsigned char ossl_der_oid_id_KMACWithSHAKE256[DER_OID_SZ_id_KMACWithSHAKE256];
Copyright (c) 2015, npm, Inc

Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
MIT License

Copyright (C) 2018-2020 Guy Bedford

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
/*
* WARNING: do not edit!
* Generated by Makefile from providers/common/include/prov/der_ecx.h.in
*
* Copyright 2020-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html

```
*/

#include "internal/der.h"
#include "crypto/ecx.h"

/* Well known OIDs precompiled */

/*
* id-X25519       OBJECT IDENTIFIER ::= { id-edwards-curve-algs 110 }
*/
#define DER_OID_V_id_X25519 DER_P_OBJECT, 3, 0x2B, 0x65, 0x6E
#define DER_OID_SZ_id_X25519 5
extern const unsigned char ossl_der_oid_id_X25519[DER_OID_SZ_id_X25519];

/*
* id-X448         OBJECT IDENTIFIER ::= { id-edwards-curve-algs 111 }
*/
#define DER_OID_V_id_X448 DER_P_OBJECT, 3, 0x2B, 0x65, 0x6F
#define DER_OID_SZ_id_X448 5
extern const unsigned char ossl_der_oid_id_X448[DER_OID_SZ_id_X448];

/*
 * id-Ed25519      OBJECT IDENTIFIER ::= { id-edwards-curve-algs 112 }
*/
#define DER_OID_V_id_Ed25519 DER_P_OBJECT, 3, 0x2B, 0x65, 0x70
#define DER_OID_SZ_id_Ed25519 5
extern const unsigned char ossl_der_oid_id_Ed25519[DER_OID_SZ_id_Ed25519];

/*
* id-Ed448        OBJECT IDENTIFIER ::= { id-edwards-curve-algs 113 }
*/
#define DER_OID_V_id_Ed448 DER_P_OBJECT, 3, 0x2B, 0x65, 0x71
#define DER_OID_SZ_id_Ed448 5
extern const unsigned char ossl_der_oid_id_Ed448[DER_OID_SZ_id_Ed448];


int ossl_DER_w_algorithmIdentifier_ED25519(WPACKET *pkt, int cont, ECX_KEY *ec);
int ossl_DER_w_algorithmIdentifier_ED448(WPACKET *pkt, int cont, ECX_KEY *ec);
int ossl_DER_w_algorithmIdentifier_X25519(WPACKET *pkt, int cont, ECX_KEY *ec);
int ossl_DER_w_algorithmIdentifier_X448(WPACKET *pkt, int cont, ECX_KEY *ec);
// Copyright (c) 2009 The RE2 Authors. All rights reserved.
//
// Redistribution and use in source and binary forms, with or without
// modification, are permitted provided that the following conditions are
// met:
//
//    * Redistributions of source code must retain the above copyright
// notice, this list of conditions and the following disclaimer.
```

//   * Redistributions in binary form must reproduce the above
// copyright notice, this list of conditions and the following disclaimer
// in the documentation and/or other materials provided with the
// distribution.
//   * Neither the name of Google Inc. nor the names of its
// contributors may be used to endorse or promote products derived from
// this software without specific prior written permission.
//
// THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
// "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
// LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
// A PARTICULAR PURPOSE
 ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
// OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
// SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
// LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
// DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
// THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
// (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
// OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright (c) 2015-present libuv project contributors.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR
 IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
IN THE SOFTWARE.
UNRECOGNIZED LICENSE; MD5 sum: 0c6fa6970743d71fb1583281dd06600e
This software is made available under the terms of *either* of the licenses
found in LICENSE.APACHE or LICENSE.BSD. Contributions to this software is made
under the terms of *both* these licenses.
ISC License

Copyright (c) npm, Inc.

Permission to use, copy, modify, and/or distribute this software for
any purpose with or without fee is hereby granted, provided that the
above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE COPYRIGHT HOLDER DISCLAIMS
ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE
COPYRIGHT HOLDER BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR
CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS
OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE
OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE
USE OR PERFORMANCE OF THIS SOFTWARE.
Copyright (c) 2011 Alexander Shtuchkin

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH
 THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
name: License update
on:
 schedule:
   # 00:00:00 every Monday
   # https://crontab.guru/#0_0_*_*_1
   - cron: 0 0 * * 1
 workflow_dispatch:

permissions:
 contents: read

jobs:
 update_license:
   permissions:
     contents: write  # for gr2m/create-or-update-pull-request-action to push local changes
```

```
    pull-requests: write  # for gr2m/create-or-update-pull-request-action to create a PR
  if: github.repository == 'nodejs/node'
  runs-on: ubuntu-latest
  steps:
    - uses: actions/checkout@11bd71901bbe5b1630ceea73d27597364c9af683  # v4.2.2
      with:
        persist-credentials: false
    - run: ./tools/license-builder.sh  # Run the license builder tool
    - uses: gr2m/create-or-update-pull-request-action@86ec1766034c8173518f61d2075cc2a173fb8c97  # v1.9.4
      # Creates a PR or update the Action's existing PR, or
      # no-op if the base branch is already up-to-date.
      env:
        GITHUB_TOKEN: ${{ secrets.GITHUB_TOKEN }}
      with:

      author: Node.js GitHub Bot <github-bot@iojs.org>
        branch: actions/license-builder
        title: 'doc: run license-builder'
        body: >
          License is likely out of date. This is an automatically generated PR by
          the `license-builder.yml` GitHub Action, which runs `license-builder.sh`
          and submits a new PR or updates an existing PR.
        commit-message: 'doc: run license-builder'
        labels: meta
```

A. HISTORY OF THE SOFTWARE
==========

Python was created in the early 1990s by Guido van Rossum at Stichting
Mathematisch Centrum (CWI, see http://www.cwi.nl) in the Netherlands
as a successor of a language called ABC. Guido remains Python's
principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for
National Research Initiatives (CNRI, see http://www.cnri.reston.va.us)
in Reston, Virginia where he released several versions of the
software.

In May 2000, Guido and the Python core development team moved to
BeOpen.com to form the BeOpen PythonLabs team. In October of the same
year, the PythonLabs team moved to Digital Creations, which became
Zope Corporation. In 2001, the Python Software Foundation (PSF, see
https://www.python.org/psf/) was formed, a non-profit organization
created specifically to own Python-related Intellectual Property.
Zope Corporation was a sponsoring member of the PSF.

All
 Python releases are Open Source (see http://www.opensource.org for
the Open Source Definition). Historically, most, but not all, Python

releases have also been GPL-compatible; the table below summarizes
the various releases.

Release	Derived from	Year	Owner	GPL-compatible? (1)
0.9.0 thru 1.2		1991-1995	CWI	yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2 and above	2.1.1	2001-now	PSF	yes

Footnotes:

(1) GPL-compatible doesn't mean that we're distributing Python under
the GPL. All Python licenses, unlike the GPL, let you distribute
a modified version without making your changes open source. The
GPL-compatible licenses make it possible to combine Python with
other software that is released under the GPL; the others don't.

(2) According to Richard Stallman, 1.6.1 is not GPL-compatible,
because its license has a choice of law clause. According to
CNRI, however, Stallman's lawyer has told CNRI's lawyer that 1.6.1
is "not incompatible" with the GPL.

Thanks to the many outside volunteers who have worked under Guido's
direction to make these releases possible.

B. TERMS AND CONDITIONS FOR ACCESSING OR OTHERWISE USING PYTHON
==========

PYTHON SOFTWARE FOUNDATION LICENSE VERSION 2
---

1. This LICENSE AGREEMENT is between the
Python Software Foundation
("PSF"), and the Individual or Organization ("Licensee") accessing and
otherwise using this software ("Python") in source or binary form and
its associated documentation.

2. Subject to the terms and conditions of this License Agreement, PSF hereby
grants Licensee a nonexclusive, royalty-free, world-wide license to reproduce,
analyze, test, perform and/or display publicly, prepare derivative works,
distribute, and otherwise use Python alone or in any derivative version,
provided, however, that PSF's License Agreement and PSF's notice of copyright,
i.e., "Copyright (c) 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010,
2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018 Python Software Foundation; All
Rights Reserved" are retained in Python alone or in any derivative version
prepared by Licensee.

3. In the event Licensee prepares a derivative work that is based on
or incorporates Python or any part thereof, and wants to make
the derivative work available
to others as provided herein, then
Licensee hereby agrees to include in any such work a brief summary of
the changes made to Python.

4. PSF is making Python available to Licensee on an "AS IS"
basis. PSF MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR
IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, PSF MAKES NO AND
DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS
FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON WILL NOT
INFRINGE ANY THIRD PARTY RIGHTS.

5. PSF SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON
FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS
A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON,
OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

6. This License Agreement will automatically terminate upon a material
breach of its terms and conditions.

7. Nothing in this License Agreement shall be deemed to create any
relationship of agency, partnership, or joint venture between PSF
and
Licensee. This License Agreement does not grant permission to use PSF
trademarks or trade name in a trademark sense to endorse or promote
products or services of Licensee, or any third party.

8. By copying, installing or otherwise using Python, Licensee
agrees to be bound by the terms and conditions of this License
Agreement.

BEOPEN.COM LICENSE AGREEMENT FOR PYTHON 2.0

BEOPEN PYTHON OPEN SOURCE LICENSE AGREEMENT VERSION 1

1. This LICENSE AGREEMENT is between BeOpen.com ("BeOpen"), having an office at 160 Saratoga Avenue, Santa Clara, CA 95051, and the Individual or Organization ("Licensee") accessing and otherwise using this software in source or binary form and its associated documentation ("the Software").

2. Subject to the terms and conditions of this BeOpen Python License Agreement, BeOpen hereby grants Licensee a non-exclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use the Software alone or in any derivative version, provided, however, that the BeOpen Python License is retained in the Software, alone or in any derivative version prepared by Licensee.

3. BeOpen is making the Software available to Licensee on an "AS IS" basis. BEOPEN MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, BEOPEN MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF THE SOFTWARE WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.

4. BEOPEN SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF THE SOFTWARE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF USING, MODIFYING OR DISTRIBUTING THE SOFTWARE, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

5. This License Agreement will automatically terminate upon a material breach of its terms and conditions.

6. This License Agreement shall be governed by and interpreted in all respects by the law of the State of California, excluding conflict of law provisions. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between BeOpen and Licensee. This License Agreement does not grant permission to use BeOpen trademarks or trade names in a trademark sense to endorse or promote products or services of Licensee, or any third party. As an exception, the "BeOpen Python" logos available at http://www.pythonlabs.com/logos.html may be used according to the permissions granted on that web page.

7. By copying, installing or otherwise using the software, Licensee agrees to be bound by the terms and conditions of this License Agreement.

CNRI LICENSE AGREEMENT FOR PYTHON 1.6.1

---

1. This LICENSE AGREEMENT is between the Corporation for National Research Initiatives, having an office at 1895 Preston White Drive, Reston, VA 20191 ("CNRI"), and the Individual or Organization ("Licensee") accessing and otherwise using Python 1.6.1 software in source or binary form and its associated documentation.

2. Subject to the terms and conditions of this License Agreement, CNRI hereby grants Licensee a nonexclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use Python 1.6.1 alone or in any derivative version, provided, however, that CNRI's License Agreement and CNRI's notice of copyright, i.e., "Copyright (c) 1995-2001 Corporation for National Research Initiatives; All Rights Reserved" are retained in Python 1.6.1 alone or in any derivative version prepared by Licensee. Alternately, in lieu of CNRI's License Agreement, Licensee may substitute the following text (omitting the quotes): "Python 1.6.1 is made available subject to the terms and conditions in CNRI's License Agreement. This Agreement together with Python 1.6.1 may be located on the Internet using the following unique, persistent identifier (known as a handle): 1895.22/1013. This Agreement may also be obtained from a proxy server on the Internet using the following URL: http://hdl.handle.net/1895.22/1013".

3. In the event Licensee prepares a derivative work that is based on or incorporates Python 1.6.1 or any part thereof, and wants to make the derivative work available to others as provided herein, then Licensee hereby agrees to include in any such work a brief summary of the changes made to Python 1.6.1.

4. CNRI is making Python 1.6.1 available to Licensee on an "AS IS" basis. CNRI MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, CNRI MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON 1.6.1 WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.

5. CNRI SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON 1.6.1 FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON 1.6.1, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

6. This License Agreement will automatically terminate upon a material

breach of its terms and conditions.

7. This License Agreement shall be governed by the federal intellectual property law of the United States, including without limitation the federal copyright law, and, to the extent such U.S. federal law does not apply, by the law of the Commonwealth of Virginia, excluding Virginia's conflict of law provisions. Notwithstanding the foregoing, with regard to derivative works based on Python 1.6.1 that incorporate non-separable material that was previously distributed under the GNU General Public License (GPL), the law of the Commonwealth of Virginia shall govern this License Agreement only as to issues arising under or with respect to Paragraphs
4, 5, and 7 of this License Agreement. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between CNRI and Licensee. This License Agreement does not grant permission to use CNRI trademarks or trade name in a trademark sense to endorse or promote products or services of Licensee, or any third party.

8. By clicking on the "ACCEPT" button where indicated, or by copying, installing or otherwise using Python 1.6.1, Licensee agrees to be bound by the terms and conditions of this License Agreement.

ACCEPT

CWI LICENSE AGREEMENT FOR PYTHON 0.9.0 THROUGH 1.2

Copyright (c) 1991 - 1995, Stichting Mathematisch Centrum Amsterdam, The Netherlands. All rights reserved.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both
that copyright notice and this permission notice appear in supporting documentation, and that the name of Stichting Mathematisch Centrum or CWI not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

STICHTING MATHEMATISCH CENTRUM DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL STICHTING MATHEMATISCH CENTRUM BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN

ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT
OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/ssl.h.in
*
* Copyright 1995-2022 The OpenSSL Project Authors. All Rights Reserved.
* Copyright (c) 2002, Oracle and/or its affiliates. All rights reserved
* Copyright 2005 Nokia. All rights reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_SSL_H
# define OPENSSL_SSL_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_SSL_H
# endif

# include <openssl/e_os2.h>
# include <openssl/opensslconf.h>
# include <openssl/comp.h>
# include <openssl/bio.h>
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  include <openssl/x509.h>
#  include <openssl/crypto.h>
#  include <openssl/buffer.h>
# endif
# include <openssl/lhash.h>
# include <openssl/pem.h>
#
 include <openssl/hmac.h>
# include <openssl/async.h>

# include <openssl/safestack.h>
# include <openssl/symhacks.h>
# include <openssl/ct.h>
# include <openssl/sslerr.h>
# include <openssl/prov_ssl.h>
```

```
#ifdef  __cplusplus
extern "C" {
#endif

/* OpenSSL version number for ASN.1 encoding of the session information */
/*-
* Version 0 - initial version
* Version 1 - added the optional peer certificate
*/
# define SSL_SESSION_ASN1_VERSION 0x0001

# define SSL_MAX_SSL_SESSION_ID_LENGTH          32
# define SSL_MAX_SID_CTX_LENGTH                 32

# define SSL_MIN_RSA_MODULUS_LENGTH_IN_BYTES    (512/8)
# define SSL_MAX_KEY_ARG_LENGTH                 8
/* SSL_MAX_MASTER_KEY_LENGTH is defined in prov_ssl.h */

/* The maximum number of encrypt/decrypt pipelines we can support */
# define SSL_MAX_PIPELINES  32

/* text strings for the ciphers */

/* These are used to specify which ciphers to use and not to use */

# define SSL_TXT_LOW            "LOW"
# define SSL_TXT_MEDIUM
 "MEDIUM"
# define SSL_TXT_HIGH           "HIGH"
# define SSL_TXT_FIPS           "FIPS"

# define SSL_TXT_aNULL          "aNULL"
# define SSL_TXT_eNULL          "eNULL"
# define SSL_TXT_NULL           "NULL"

# define SSL_TXT_kRSA           "kRSA"
# define SSL_TXT_kDHr           "kDHr"/* this cipher class has been removed */
# define SSL_TXT_kDHd           "kDHd"/* this cipher class has been removed */
# define SSL_TXT_kDH            "kDH"/* this cipher class has been removed */
# define SSL_TXT_kEDH           "kEDH"/* alias for kDHE */
# define SSL_TXT_kDHE           "kDHE"
# define SSL_TXT_kECDHr         "kECDHr"/* this cipher class has been removed */
# define SSL_TXT_kECDHe         "kECDHe"/* this cipher class has been removed */
# define SSL_TXT_kECDH          "kECDH"/* this cipher class has been removed */
# define SSL_TXT_kEECDH         "kEECDH"/* alias for kECDHE */
# define SSL_TXT_kECDHE         "kECDHE"
# define SSL_TXT_kPSK           "kPSK"
# define SSL_TXT_kRSAPSK
```

```
        "kRSAPSK"
# define SSL_TXT_kECDHEPSK      "kECDHEPSK"
# define SSL_TXT_kDHEPSK        "kDHEPSK"
# define SSL_TXT_kGOST          "kGOST"
# define SSL_TXT_kGOST18        "kGOST18"
# define SSL_TXT_kSRP           "kSRP"

# define SSL_TXT_aRSA           "aRSA"
# define SSL_TXT_aDSS           "aDSS"
# define SSL_TXT_aDH            "aDH"/* this cipher class has been removed */
# define SSL_TXT_aECDH          "aECDH"/* this cipher class has been removed */
# define SSL_TXT_aECDSA         "aECDSA"
# define SSL_TXT_aPSK           "aPSK"
# define SSL_TXT_aGOST94        "aGOST94"
# define SSL_TXT_aGOST01        "aGOST01"
# define SSL_TXT_aGOST12        "aGOST12"
# define SSL_TXT_aGOST          "aGOST"
# define SSL_TXT_aSRP           "aSRP"

# define SSL_TXT_DSS            "DSS"
# define SSL_TXT_DH             "DH"
# define SSL_TXT_DHE            "DHE"/* same as "kDHE:-ADH" */
# define SSL_TXT_EDH            "EDH"/* alias for DHE */
# define SSL_TXT_ADH
    "ADH"
# define SSL_TXT_RSA            "RSA"
# define SSL_TXT_ECDH           "ECDH"
# define SSL_TXT_EECDH          "EECDH"/* alias for ECDHE" */
# define SSL_TXT_ECDHE          "ECDHE"/* same as "kECDHE:-AECDH" */
# define SSL_TXT_AECDH          "AECDH"
# define SSL_TXT_ECDSA          "ECDSA"
# define SSL_TXT_PSK            "PSK"
# define SSL_TXT_SRP            "SRP"

# define SSL_TXT_DES            "DES"
# define SSL_TXT_3DES           "3DES"
# define SSL_TXT_RC4            "RC4"
# define SSL_TXT_RC2            "RC2"
# define SSL_TXT_IDEA           "IDEA"
# define SSL_TXT_SEED           "SEED"
# define SSL_TXT_AES128         "AES128"
# define SSL_TXT_AES256         "AES256"
# define SSL_TXT_AES            "AES"
# define SSL_TXT_AES_GCM        "AESGCM"
# define SSL_TXT_AES_CCM        "AESCCM"
# define SSL_TXT_AES_CCM_8      "AESCCM8"
# define SSL_TXT_CAMELLIA128    "CAMELLIA128"
# define SSL_TXT_CAMELLIA256    "CAMELLIA256"
```

```
# define SSL_TXT_CAMELLIA       "CAMELLIA"
#
 define SSL_TXT_CHACHA20       "CHACHA20"
# define SSL_TXT_GOST           "GOST89"
# define SSL_TXT_ARIA           "ARIA"
# define SSL_TXT_ARIA_GCM       "ARIAGCM"
# define SSL_TXT_ARIA128        "ARIA128"
# define SSL_TXT_ARIA256        "ARIA256"
# define SSL_TXT_GOST2012_GOST8912_GOST8912 "GOST2012-GOST8912-GOST8912"
# define SSL_TXT_CBC            "CBC"

# define SSL_TXT_MD5            "MD5"
# define SSL_TXT_SHA1           "SHA1"
# define SSL_TXT_SHA            "SHA"/* same as "SHA1" */
# define SSL_TXT_GOST94         "GOST94"
# define SSL_TXT_GOST89MAC      "GOST89MAC"
# define SSL_TXT_GOST12         "GOST12"
# define SSL_TXT_GOST89MAC12    "GOST89MAC12"
# define SSL_TXT_SHA256         "SHA256"
# define SSL_TXT_SHA384         "SHA384"

# define SSL_TXT_SSLV3          "SSLv3"
# define SSL_TXT_TLSV1          "TLSv1"
# define SSL_TXT_TLSV1_1        "TLSv1.1"
# define SSL_TXT_TLSV1_2        "TLSv1.2"

# define SSL_TXT_ALL            "ALL"

/*-
* COMPLEMENTOF*
 definitions. These identifiers are used to (de-select)
* ciphers normally not being used.
* Example: "RC4" will activate all ciphers using RC4 including ciphers
* without authentication, which would normally disabled by DEFAULT (due
* the "!ADH" being part of default). Therefore "RC4:!COMPLEMENTOFDEFAULT"
* will make sure that it is also disabled in the specific selection.
* COMPLEMENTOF* identifiers are portable between version, as adjustments
* to the default cipher setup will also be included here.
*
* COMPLEMENTOFDEFAULT does not experience the same special treatment that
* DEFAULT gets, as only selection is being done and no sorting as needed
* for DEFAULT.
*/
# define SSL_TXT_CMPALL         "COMPLEMENTOFALL"
# define SSL_TXT_CMPDEF         "COMPLEMENTOFDEFAULT"

/*
* The following cipher list is used by default. It also is substituted when
```

```
* an application-defined cipher list string starts with 'DEFAULT'.
* This applies to ciphersuites for TLSv1.2 and below.
 * DEPRECATED IN 3.0.0, in favor of OSSL_default_cipher_list()
* Update both macro and function simultaneously
*/
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define SSL_DEFAULT_CIPHER_LIST "ALL:!COMPLEMENTOFDEFAULT:!eNULL"
/*
* This is the default set of TLSv1.3 ciphersuites
* DEPRECATED IN 3.0.0, in favor of OSSL_default_ciphersuites()
* Update both macro and function simultaneously
*/
#  define TLS_DEFAULT_CIPHERSUITES "TLS_AES_256_GCM_SHA384:" \
                           "TLS_CHACHA20_POLY1305_SHA256:" \
                           "TLS_AES_128_GCM_SHA256"
# endif
/*
* As of OpenSSL 1.0.0, ssl_create_cipher_list() in ssl/ssl_ciph.c always
* starts with a reasonable order, and all we have to do for DEFAULT is
* throwing out anonymous and unencrypted ciphersuites! (The latter are not
* actually enabled by ALL, but "ALL:RSA" would enable some of them.)
*/

/* Used in SSL_set_shutdown()/SSL_get_shutdown(); */
# define SSL_SENT_SHUTDOWN      1
# define SSL_RECEIVED_SHUTDOWN
  2

#ifdef __cplusplus
}
#endif

#ifdef  __cplusplus
extern "C" {
#endif

# define SSL_FILETYPE_ASN1       X509_FILETYPE_ASN1
# define SSL_FILETYPE_PEM        X509_FILETYPE_PEM

/*
* This is needed to stop compilers complaining about the 'struct ssl_st *'
* function parameters used to prototype callbacks in SSL_CTX.
*/
typedef struct ssl_st *ssl_crock_st;
typedef struct tls_session_ticket_ext_st TLS_SESSION_TICKET_EXT;
typedef struct ssl_method_st SSL_METHOD;
typedef struct ssl_cipher_st SSL_CIPHER;
typedef struct ssl_session_st SSL_SESSION;
```

```
typedef struct tls_sigalgs_st TLS_SIGALGS;
typedef struct ssl_conf_ctx_st SSL_CONF_CTX;
typedef struct ssl_comp_st SSL_COMP;

STACK_OF(SSL_CIPHER);
STACK_OF(SSL_COMP);

/* SRTP protection profiles for use with the use_srtp extension (RFC 5764)*/
typedef struct srtp_protection_profile_st {
  const char *name;
  unsigned long id;
} SRTP_PROTECTION_PROFILE;
SKM_DEFINE_STACK_OF_INTERNAL(SRTP_PROTECTION_PROFILE, SRTP_PROTECTION_PROFILE,
 SRTP_PROTECTION_PROFILE)
#define sk_SRTP_PROTECTION_PROFILE_num(sk)
OPENSSL_sk_num(ossl_check_const_SRTP_PROTECTION_PROFILE_sk_type(sk))
#define sk_SRTP_PROTECTION_PROFILE_value(sk, idx) ((SRTP_PROTECTION_PROFILE
*)OPENSSL_sk_value(ossl_check_const_SRTP_PROTECTION_PROFILE_sk_type(sk), (idx)))
#define sk_SRTP_PROTECTION_PROFILE_new(cmp) ((STACK_OF(SRTP_PROTECTION_PROFILE)
*)OPENSSL_sk_new(ossl_check_SRTP_PROTECTION_PROFILE_compfunc_type(cmp)))
#define sk_SRTP_PROTECTION_PROFILE_new_null() ((STACK_OF(SRTP_PROTECTION_PROFILE)
*)OPENSSL_sk_new_null())
#define sk_SRTP_PROTECTION_PROFILE_new_reserve(cmp, n)
((STACK_OF(SRTP_PROTECTION_PROFILE)
*)OPENSSL_sk_new_reserve(ossl_check_SRTP_PROTECTION_PROFILE_compfunc_type(cmp), (n)))
#define sk_SRTP_PROTECTION_PROFILE_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk), (n))
#define sk_SRTP_PROTECTION_PROFILE_free(sk)
OPENSSL_sk_free(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk))
#define sk_SRTP_PROTECTION_PROFILE_zero(sk)
 OPENSSL_sk_zero(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk))
#define sk_SRTP_PROTECTION_PROFILE_delete(sk, i) ((SRTP_PROTECTION_PROFILE
*)OPENSSL_sk_delete(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk), (i)))
#define sk_SRTP_PROTECTION_PROFILE_delete_ptr(sk, ptr) ((SRTP_PROTECTION_PROFILE
*)OPENSSL_sk_delete_ptr(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk),
ossl_check_SRTP_PROTECTION_PROFILE_type(ptr)))
#define sk_SRTP_PROTECTION_PROFILE_push(sk, ptr)
OPENSSL_sk_push(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk),
ossl_check_SRTP_PROTECTION_PROFILE_type(ptr))
#define sk_SRTP_PROTECTION_PROFILE_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk),
ossl_check_SRTP_PROTECTION_PROFILE_type(ptr))
#define sk_SRTP_PROTECTION_PROFILE_pop(sk) ((SRTP_PROTECTION_PROFILE
*)OPENSSL_sk_pop(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk)))
#define sk_SRTP_PROTECTION_PROFILE_shift(sk) ((SRTP_PROTECTION_PROFILE
*)OPENSSL_sk_shift(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk)))
#define
```

```
 sk_SRTP_PROTECTION_PROFILE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk),ossl_check_SRTP_PROTECTI
ON_PROFILE_freefunc_type(freefunc))
#define sk_SRTP_PROTECTION_PROFILE_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk),
ossl_check_SRTP_PROTECTION_PROFILE_type(ptr), (idx))
#define sk_SRTP_PROTECTION_PROFILE_set(sk, idx, ptr) ((SRTP_PROTECTION_PROFILE
*)OPENSSL_sk_set(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk), (idx),
ossl_check_SRTP_PROTECTION_PROFILE_type(ptr)))
#define sk_SRTP_PROTECTION_PROFILE_find(sk, ptr)
OPENSSL_sk_find(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk),
ossl_check_SRTP_PROTECTION_PROFILE_type(ptr))
#define sk_SRTP_PROTECTION_PROFILE_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk),
ossl_check_SRTP_PROTECTION_PROFILE_type(ptr))
#define sk_SRTP_PROTECTION_PROFILE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk),
 ossl_check_SRTP_PROTECTION_PROFILE_type(ptr), pnum)
#define sk_SRTP_PROTECTION_PROFILE_sort(sk)
OPENSSL_sk_sort(ossl_check_SRTP_PROTECTION_PROFILE_sk_type(sk))
#define sk_SRTP_PROTECTION_PROFILE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_SRTP_PROTECTION_PROFILE_sk_type(sk))
#define sk_SRTP_PROTECTION_PROFILE_dup(sk) ((STACK_OF(SRTP_PROTECTION_PROFILE)
*)OPENSSL_sk_dup(ossl_check_const_SRTP_PROTECTION_PROFILE_sk_type(sk)))
#define sk_SRTP_PROTECTION_PROFILE_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(SRTP_PROTECTION_PROFILE)
*)OPENSSL_sk_deep_copy(ossl_check_const_SRTP_PROTECTION_PROFILE_sk_type(sk),
ossl_check_SRTP_PROTECTION_PROFILE_copyfunc_type(copyfunc),
ossl_check_SRTP_PROTECTION_PROFILE_freefunc_type(freefunc)))
#define sk_SRTP_PROTECTION_PROFILE_set_cmp_func(sk, cmp)
((sk_SRTP_PROTECTION_PROFILE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_SRTP_PROTECTION
_PROFILE_sk_type(sk), ossl_check_SRTP_PROTECTION_PROFILE_compfunc_type(cmp)))



typedef int
 (*tls_session_ticket_ext_cb_fn)(SSL *s, const unsigned char *data,
                                 int len, void *arg);
typedef int (*tls_session_secret_cb_fn)(SSL *s, void *secret, int *secret_len,
                                STACK_OF(SSL_CIPHER) *peer_ciphers,
                                const SSL_CIPHER **cipher, void *arg);

/* Extension context codes */
/* This extension is only allowed in TLS */
#define SSL_EXT_TLS_ONLY                    0x0001
/* This extension is only allowed in DTLS */
#define SSL_EXT_DTLS_ONLY                   0x0002
/* Some extensions may be allowed in DTLS but we don't implement them for it */
```

```
#define SSL_EXT_TLS_IMPLEMENTATION_ONLY         0x0004
/* Most extensions are not defined for SSLv3 but EXT_TYPE_renegotiate is */
#define SSL_EXT_SSL3_ALLOWED                    0x0008
/* Extension is only defined for TLS1.2 and below */
#define SSL_EXT_TLS1_2_AND_BELOW_ONLY           0x0010
/* Extension is only defined
 for TLS1.3 and above */
#define SSL_EXT_TLS1_3_ONLY                     0x0020
/* Ignore this extension during parsing if we are resuming */
#define SSL_EXT_IGNORE_ON_RESUMPTION            0x0040
#define SSL_EXT_CLIENT_HELLO                    0x0080
/* Really means TLS1.2 or below */
#define SSL_EXT_TLS1_2_SERVER_HELLO             0x0100
#define SSL_EXT_TLS1_3_SERVER_HELLO             0x0200
#define SSL_EXT_TLS1_3_ENCRYPTED_EXTENSIONS     0x0400
#define SSL_EXT_TLS1_3_HELLO_RETRY_REQUEST      0x0800
#define SSL_EXT_TLS1_3_CERTIFICATE              0x1000
#define SSL_EXT_TLS1_3_NEW_SESSION_TICKET       0x2000
#define SSL_EXT_TLS1_3_CERTIFICATE_REQUEST      0x4000

/* Typedefs for handling custom extensions */

typedef int (*custom_ext_add_cb)(SSL *s, unsigned int ext_type,
                         const unsigned char **out, size_t *outlen,
                         int *al, void *add_arg);

typedef void (*custom_ext_free_cb)(SSL *s, unsigned int ext_type,

                   const unsigned char *out, void *add_arg);

typedef int (*custom_ext_parse_cb)(SSL *s, unsigned int ext_type,
                           const unsigned char *in, size_t inlen,
                           int *al, void *parse_arg);


typedef int (*SSL_custom_ext_add_cb_ex)(SSL *s, unsigned int ext_type,
                                unsigned int context,
                                const unsigned char **out,
                                size_t *outlen, X509 *x,
                                size_t chainidx,
                                int *al, void *add_arg);

typedef void (*SSL_custom_ext_free_cb_ex)(SSL *s, unsigned int ext_type,
                                  unsigned int context,
                                  const unsigned char *out,
                                  void *add_arg);

typedef int (*SSL_custom_ext_parse_cb_ex)(SSL *s, unsigned int ext_type,
```

```
                        unsigned int context,
                            const unsigned char *in,
                            size_t inlen, X509 *x,
                            size_t chainidx,
                            int *al, void *parse_arg);

/* Typedef for verification callback */
typedef int (*SSL_verify_cb)(int preverify_ok, X509_STORE_CTX *x509_ctx);

/* Typedef for SSL async callback */
typedef int (*SSL_async_callback_fn)(SSL *s, void *arg);

#define SSL_OP_BIT(n)  ((uint64_t)1 << (uint64_t)n)

/*
* SSL/TLS connection options.
*/
   /* Disable Extended master secret */
# define SSL_OP_NO_EXTENDED_MASTER_SECRET               SSL_OP_BIT(0)
   /* Cleanse plaintext copies of data delivered to the application */
# define SSL_OP_CLEANSE_PLAINTEXT                       SSL_OP_BIT(1)
   /* Allow initial connection to servers that don't support RI */
# define SSL_OP_LEGACY_SERVER_CONNECT                   SSL_OP_BIT(2)
    /* Enable support for Kernel TLS */
# define SSL_OP_ENABLE_KTLS                             SSL_OP_BIT(3)
# define SSL_OP_TLSEXT_PADDING                          SSL_OP_BIT(4)
# define SSL_OP_SAFARI_ECDHE_ECDSA_BUG                  SSL_OP_BIT(6)
# define SSL_OP_IGNORE_UNEXPECTED_EOF                   SSL_OP_BIT(7)
# define SSL_OP_ALLOW_CLIENT_RENEGOTIATION              SSL_OP_BIT(8)
# define SSL_OP_DISABLE_TLSEXT_CA_NAMES                 SSL_OP_BIT(9)
   /* In TLSv1.3 allow a non-(ec)dhe based kex_mode */
# define SSL_OP_ALLOW_NO_DHE_KEX                        SSL_OP_BIT(10)
   /*
    * Disable SSL 3.0/TLS 1.0 CBC vulnerability workaround that was added
    * in OpenSSL 0.9.6d.  Usually (depending on the application protocol)
    * the workaround is not needed.  Unfortunately some broken SSL/TLS
    * implementations cannot handle it at all, which is why we include it
    * in SSL_OP_ALL. Added in 0.9.6e
    */
# define SSL_OP_DONT_INSERT_EMPTY_FRAGMENTS
            SSL_OP_BIT(11)
   /* DTLS options */
# define SSL_OP_NO_QUERY_MTU                            SSL_OP_BIT(12)
   /* Turn on Cookie Exchange (on relevant for servers) */
# define SSL_OP_COOKIE_EXCHANGE                         SSL_OP_BIT(13)
   /* Don't use RFC4507 ticket extension */
# define SSL_OP_NO_TICKET                               SSL_OP_BIT(14)
```

```
# ifndef OPENSSL_NO_DTLS1_METHOD
  /*
   * Use Cisco's version identifier of DTLS_BAD_VER
   * (only with deprecated DTLSv1_client_method())
   */
#  define SSL_OP_CISCO_ANYCONNECT                     SSL_OP_BIT(15)
# endif
  /* As server, disallow session resumption on renegotiation */
# define SSL_OP_NO_SESSION_RESUMPTION_ON_RENEGOTIATION   SSL_OP_BIT(16)
  /* Don't use compression even if supported */
# define SSL_OP_NO_COMPRESSION                        SSL_OP_BIT(17)
  /* Permit unsafe legacy renegotiation */
# define SSL_OP_ALLOW_UNSAFE_LEGACY_RENEGOTIATION       SSL_OP_BIT(18)
  /* Disable
 encrypt-then-mac */
# define SSL_OP_NO_ENCRYPT_THEN_MAC                   SSL_OP_BIT(19)
  /*
   * Enable TLSv1.3 Compatibility mode. This is on by default. A future
   * version of OpenSSL may have this disabled by default.
   */
# define SSL_OP_ENABLE_MIDDLEBOX_COMPAT               SSL_OP_BIT(20)
  /*
   * Prioritize Chacha20Poly1305 when client does.
   * Modifies SSL_OP_CIPHER_SERVER_PREFERENCE
   */
# define SSL_OP_PRIORITIZE_CHACHA                     SSL_OP_BIT(21)
  /*
   * Set on servers to choose the cipher according to server's preferences.
   */
# define SSL_OP_CIPHER_SERVER_PREFERENCE              SSL_OP_BIT(22)
  /*
   * If set, a server will allow a client to issue a SSLv3.0 version
   * number as latest version supported in the premaster secret, even when
   * TLSv1.0 (version 3.1) was announced in the client hello. Normally
   * this is forbidden to prevent version rollback attacks.
   */
# define SSL_OP_TLS_ROLLBACK_BUG
                  SSL_OP_BIT(23)
  /*
   * Switches off automatic TLSv1.3 anti-replay protection for early data.
   * This is a server-side option only (no effect on the client).
   */
# define SSL_OP_NO_ANTI_REPLAY                        SSL_OP_BIT(24)
# define SSL_OP_NO_SSLv3                            SSL_OP_BIT(25)
# define SSL_OP_NO_TLSv1                            SSL_OP_BIT(26)
# define SSL_OP_NO_TLSv1_2                            SSL_OP_BIT(27)
# define SSL_OP_NO_TLSv1_1                            SSL_OP_BIT(28)
# define SSL_OP_NO_TLSv1_3                            SSL_OP_BIT(29)
```

```
# define SSL_OP_NO_DTLSv1                        SSL_OP_BIT(26)
# define SSL_OP_NO_DTLSv1_2                      SSL_OP_BIT(27)
  /* Disallow all renegotiation */
# define SSL_OP_NO_RENEGOTIATION                 SSL_OP_BIT(30)
  /*
   * Make server add server-hello extension from early version of
   * cryptopro draft, when GOST ciphersuite
 is negotiated. Required for
   * interoperability with CryptoPro CSP 3.x
   */
# define SSL_OP_CRYPTOPRO_TLSEXT_BUG             SSL_OP_BIT(31)

/*
* Option "collections."
*/
# define SSL_OP_NO_SSL_MASK \
      ( SSL_OP_NO_SSLv3 | SSL_OP_NO_TLSv1 | SSL_OP_NO_TLSv1_1 \
       | SSL_OP_NO_TLSv1_2 | SSL_OP_NO_TLSv1_3 )
# define SSL_OP_NO_DTLS_MASK \
      ( SSL_OP_NO_DTLSv1 | SSL_OP_NO_DTLSv1_2 )

/* Various bug workarounds that should be rather harmless. */
# define SSL_OP_ALL \
      ( SSL_OP_CRYPTOPRO_TLSEXT_BUG | SSL_OP_DONT_INSERT_EMPTY_FRAGMENTS \
       | SSL_OP_TLSEXT_PADDING | SSL_OP_SAFARI_ECDHE_ECDSA_BUG )

/*
* OBSOLETE OPTIONS retained for compatibility
*/

# define SSL_OP_MICROSOFT_SESS_ID_BUG            0x0
# define SSL_OP_NETSCAPE_CHALLENGE_BUG           0x0
# define SSL_OP_NETSCAPE_REUSE_CIPHER_CHANGE_BUG 0x0
# define SSL_OP_SSLREF2_REUSE_CERT_TYPE_BUG      0x0
# define SSL_OP_MICROSOFT_BIG_SSLV3_BUFFER
      0x0
# define SSL_OP_MSIE_SSLV2_RSA_PADDING           0x0
# define SSL_OP_SSLEAY_080_CLIENT_DH_BUG         0x0
# define SSL_OP_TLS_D5_BUG                       0x0
# define SSL_OP_TLS_BLOCK_PADDING_BUG            0x0
# define SSL_OP_SINGLE_ECDH_USE                  0x0
# define SSL_OP_SINGLE_DH_USE                    0x0
# define SSL_OP_EPHEMERAL_RSA                    0x0
# define SSL_OP_NO_SSLv2                         0x0
# define SSL_OP_PKCS1_CHECK_1                    0x0
# define SSL_OP_PKCS1_CHECK_2                    0x0
# define SSL_OP_NETSCAPE_CA_DN_BUG               0x0
# define SSL_OP_NETSCAPE_DEMO_CIPHER_CHANGE_BUG  0x0
```

```
/*
* Allow SSL_write(..., n) to return r with 0 < r < n (i.e. report success
* when just a single record has been written):
*/
# define SSL_MODE_ENABLE_PARTIAL_WRITE       0x00000001U
/*
* Make it possible to retry SSL_write() with changed buffer location
 (buffer
* contents must stay the same!); this is not the default to avoid the
* misconception that non-blocking SSL_write() behaves like non-blocking
* write():
*/
# define SSL_MODE_ACCEPT_MOVING_WRITE_BUFFER 0x00000002U
/*
* Never bother the application with retries if the transport is blocking:
*/
# define SSL_MODE_AUTO_RETRY 0x00000004U
/* Don't attempt to automatically build certificate chain */
# define SSL_MODE_NO_AUTO_CHAIN 0x00000008U
/*
* Save RAM by releasing read and write buffers when they're empty. (SSL3 and
* TLS only.) Released buffers are freed.
*/
# define SSL_MODE_RELEASE_BUFFERS 0x00000010U
/*
* Send the current time in the Random fields of the ClientHello and
* ServerHello records for compatibility with hypothetical implementations
* that require it.
*/
# define SSL_MODE_SEND_CLIENTHELLO_TIME 0x00000020U
# define SSL_MODE_SEND_SERVERHELLO_TIME 0x00000040U
/*
* Send TLS_FALLBACK_SCSV in the ClientHello. To be set only by applications
* that reconnect
 with a downgraded protocol version; see
* draft-ietf-tls-downgrade-scsv-00 for details. DO NOT ENABLE THIS if your
* application attempts a normal handshake. Only use this in explicit
* fallback retries, following the guidance in
* draft-ietf-tls-downgrade-scsv-00.
*/
# define SSL_MODE_SEND_FALLBACK_SCSV 0x00000080U
/*
* Support Asynchronous operation
*/
# define SSL_MODE_ASYNC 0x00000100U

/*
```

```
* When using DTLS/SCTP, include the terminating zero in the label
* used for computing the endpoint-pair shared secret. Required for
* interoperability with implementations having this bug like these
* older version of OpenSSL:
* - OpenSSL 1.0.0 series
* - OpenSSL 1.0.1 series
* - OpenSSL 1.0.2 series
* - OpenSSL 1.1.0 series
* - OpenSSL 1.1.1 and 1.1.1a
*/
# define SSL_MODE_DTLS_SCTP_LABEL_LENGTH_BUG 0x00000400U

/* Cert related flags */
/*
* Many implementations ignore some aspects of the TLS standards such as
* enforcing certificate chain algorithms. When this is set we enforce
 them.
*/
# define SSL_CERT_FLAG_TLS_STRICT               0x00000001U

/* Suite B modes, takes same values as certificate verify flags */
# define SSL_CERT_FLAG_SUITEB_128_LOS_ONLY      0x10000
/* Suite B 192 bit only mode */
# define SSL_CERT_FLAG_SUITEB_192_LOS           0x20000
/* Suite B 128 bit mode allowing 192 bit algorithms */
# define SSL_CERT_FLAG_SUITEB_128_LOS           0x30000

/* Perform all sorts of protocol violations for testing purposes */
# define SSL_CERT_FLAG_BROKEN_PROTOCOL          0x10000000

/* Flags for building certificate chains */
/* Treat any existing certificates as untrusted CAs */
# define SSL_BUILD_CHAIN_FLAG_UNTRUSTED         0x1
/* Don't include root CA in chain */
# define SSL_BUILD_CHAIN_FLAG_NO_ROOT           0x2
/* Just check certificates already there */
# define SSL_BUILD_CHAIN_FLAG_CHECK             0x4
/* Ignore verification errors */
# define SSL_BUILD_CHAIN_FLAG_IGNORE_ERROR      0x8
/* Clear verification errors from queue */
#
 define SSL_BUILD_CHAIN_FLAG_CLEAR_ERROR       0x10

/* Flags returned by SSL_check_chain */
/* Certificate can be used with this session */
# define CERT_PKEY_VALID         0x1
/* Certificate can also be used for signing */
# define CERT_PKEY_SIGN          0x2
```

```
/* EE certificate signing algorithm OK */
# define CERT_PKEY_EE_SIGNATURE  0x10
/* CA signature algorithms OK */
# define CERT_PKEY_CA_SIGNATURE  0x20
/* EE certificate parameters OK */
# define CERT_PKEY_EE_PARAM      0x40
/* CA certificate parameters OK */
# define CERT_PKEY_CA_PARAM      0x80
/* Signing explicitly allowed as opposed to SHA1 fallback */
# define CERT_PKEY_EXPLICIT_SIGN 0x100
/* Client CA issuer names match (always set for server cert) */
# define CERT_PKEY_ISSUER_NAME   0x200
/* Cert type matches client types (always set for server cert) */
# define CERT_PKEY_CERT_TYPE     0x400
/* Cert chain suitable to Suite B */
# define CERT_PKEY_SUITEB        0x800

# define SSL_CONF_FLAG_CMDLINE          0x1
# define
 SSL_CONF_FLAG_FILE             0x2
# define SSL_CONF_FLAG_CLIENT           0x4
# define SSL_CONF_FLAG_SERVER           0x8
# define SSL_CONF_FLAG_SHOW_ERRORS      0x10
# define SSL_CONF_FLAG_CERTIFICATE      0x20
# define SSL_CONF_FLAG_REQUIRE_PRIVATE  0x40
/* Configuration value types */
# define SSL_CONF_TYPE_UNKNOWN          0x0
# define SSL_CONF_TYPE_STRING           0x1
# define SSL_CONF_TYPE_FILE             0x2
# define SSL_CONF_TYPE_DIR              0x3
# define SSL_CONF_TYPE_NONE             0x4
# define SSL_CONF_TYPE_STORE            0x5

/* Maximum length of the application-controlled segment of a a TLSv1.3 cookie */
# define SSL_COOKIE_LENGTH                      4096

/*
* Note: SSL[_CTX]_set_{options,mode} use |= op on the previous value, they
* cannot be used to clear bits.
*/

uint64_t SSL_CTX_get_options(const SSL_CTX *ctx);
uint64_t SSL_get_options(const SSL *s);
uint64_t SSL_CTX_clear_options(SSL_CTX *ctx, uint64_t op);
uint64_t SSL_clear_options(SSL
 *s, uint64_t op);
uint64_t SSL_CTX_set_options(SSL_CTX *ctx, uint64_t op);
uint64_t SSL_set_options(SSL *s, uint64_t op);
```

```
# define SSL_CTX_set_mode(ctx,op) \
     SSL_CTX_ctrl((ctx),SSL_CTRL_MODE,(op),NULL)
# define SSL_CTX_clear_mode(ctx,op) \
     SSL_CTX_ctrl((ctx),SSL_CTRL_CLEAR_MODE,(op),NULL)
# define SSL_CTX_get_mode(ctx) \
     SSL_CTX_ctrl((ctx),SSL_CTRL_MODE,0,NULL)
# define SSL_clear_mode(ssl,op) \
     SSL_ctrl((ssl),SSL_CTRL_CLEAR_MODE,(op),NULL)
# define SSL_set_mode(ssl,op) \
     SSL_ctrl((ssl),SSL_CTRL_MODE,(op),NULL)
# define SSL_get_mode(ssl) \
     SSL_ctrl((ssl),SSL_CTRL_MODE,0,NULL)
# define SSL_set_mtu(ssl, mtu) \
     SSL_ctrl((ssl),SSL_CTRL_SET_MTU,(mtu),NULL)
# define DTLS_set_link_mtu(ssl, mtu) \
     SSL_ctrl((ssl),DTLS_CTRL_SET_LINK_MTU,(mtu),NULL)
# define DTLS_get_link_min_mtu(ssl) \
     SSL_ctrl((ssl),DTLS_CTRL_GET_LINK_MIN_MTU,0,NULL)

# define SSL_get_secure_renegotiation_support(ssl) \
     SSL_ctrl((ssl), SSL_CTRL_GET_RI_SUPPORT,
 0, NULL)

# define SSL_CTX_set_cert_flags(ctx,op) \
     SSL_CTX_ctrl((ctx),SSL_CTRL_CERT_FLAGS,(op),NULL)
# define SSL_set_cert_flags(s,op) \
     SSL_ctrl((s),SSL_CTRL_CERT_FLAGS,(op),NULL)
# define SSL_CTX_clear_cert_flags(ctx,op) \
     SSL_CTX_ctrl((ctx),SSL_CTRL_CLEAR_CERT_FLAGS,(op),NULL)
# define SSL_clear_cert_flags(s,op) \
     SSL_ctrl((s),SSL_CTRL_CLEAR_CERT_FLAGS,(op),NULL)

void SSL_CTX_set_msg_callback(SSL_CTX *ctx,
                      void (*cb) (int write_p, int version,
                                  int content_type, const void *buf,
                                  size_t len, SSL *ssl, void *arg));
void SSL_set_msg_callback(SSL *ssl,
                    void (*cb) (int write_p, int version,
                                int content_type, const void *buf,
                                size_t len, SSL *ssl, void *arg));
# define SSL_CTX_set_msg_callback_arg(ctx, arg) SSL_CTX_ctrl((ctx),
SSL_CTRL_SET_MSG_CALLBACK_ARG,
 0, (arg))
# define SSL_set_msg_callback_arg(ssl, arg) SSL_ctrl((ssl), SSL_CTRL_SET_MSG_CALLBACK_ARG, 0, (arg))

# define SSL_get_extms_support(s) \
     SSL_ctrl((s),SSL_CTRL_GET_EXTMS_SUPPORT,0,NULL)
```

```
# ifndef OPENSSL_NO_SRP
/* see tls_srp.c */
#  ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 __owur int SSL_SRP_CTX_init(SSL *s);
OSSL_DEPRECATEDIN_3_0 __owur int SSL_CTX_SRP_CTX_init(SSL_CTX *ctx);
OSSL_DEPRECATEDIN_3_0 int SSL_SRP_CTX_free(SSL *ctx);
OSSL_DEPRECATEDIN_3_0 int SSL_CTX_SRP_CTX_free(SSL_CTX *ctx);
OSSL_DEPRECATEDIN_3_0 __owur int SSL_srp_server_param_with_username(SSL *s,
                                            int *ad);
OSSL_DEPRECATEDIN_3_0 __owur int SRP_Calc_A_param(SSL *s);
#  endif
# endif

/* 100k max cert list */
# define SSL_MAX_CERT_LIST_DEFAULT (1024*100)

# define SSL_SESSION_CACHE_MAX_SIZE_DEFAULT      (1024*20)

/*
* This callback type is used inside SSL_CTX, SSL, and in the functions that
 * set them. It is used to override the generation of SSL/TLS session IDs in
* a server. Return value should be zero on an error, non-zero to proceed.
* Also, callbacks should themselves check if the id they generate is unique
* otherwise the SSL handshake will fail with an error - callbacks can do
* this using the 'ssl' value they're passed by;
* SSL_has_matching_session_id(ssl, id, *id_len) The length value passed in
* is set at the maximum size the session ID can be. In SSLv3/TLSv1 it is 32
* bytes. The callback can alter this length to be less if desired. It is
* also an error for the callback to set the size to zero.
*/
typedef int (*GEN_SESSION_CB) (SSL *ssl, unsigned char *id,
                               unsigned int *id_len);

# define SSL_SESS_CACHE_OFF                      0x0000
# define SSL_SESS_CACHE_CLIENT                   0x0001
# define SSL_SESS_CACHE_SERVER                   0x0002
# define SSL_SESS_CACHE_BOTH     (SSL_SESS_CACHE_CLIENT|SSL_SESS_CACHE_SERVER)
#
 define SSL_SESS_CACHE_NO_AUTO_CLEAR            0x0080
/* enough comments already ... see SSL_CTX_set_session_cache_mode(3) */
# define SSL_SESS_CACHE_NO_INTERNAL_LOOKUP       0x0100
# define SSL_SESS_CACHE_NO_INTERNAL_STORE        0x0200
# define SSL_SESS_CACHE_NO_INTERNAL \
      (SSL_SESS_CACHE_NO_INTERNAL_LOOKUP|SSL_SESS_CACHE_NO_INTERNAL_STORE)
# define SSL_SESS_CACHE_UPDATE_TIME              0x0400

LHASH_OF(SSL_SESSION) *SSL_CTX_sessions(SSL_CTX *ctx);
```

```
# define SSL_CTX_sess_number(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_NUMBER,0,NULL)
# define SSL_CTX_sess_connect(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_CONNECT,0,NULL)
# define SSL_CTX_sess_connect_good(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_CONNECT_GOOD,0,NULL)
# define SSL_CTX_sess_connect_renegotiate(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_CONNECT_RENEGOTIATE,0,NULL)
# define SSL_CTX_sess_accept(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_ACCEPT,0,NULL)
# define SSL_CTX_sess_accept_renegotiate(ctx)
 \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_ACCEPT_RENEGOTIATE,0,NULL)
# define SSL_CTX_sess_accept_good(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_ACCEPT_GOOD,0,NULL)
# define SSL_CTX_sess_hits(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_HIT,0,NULL)
# define SSL_CTX_sess_cb_hits(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_CB_HIT,0,NULL)
# define SSL_CTX_sess_misses(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_MISSES,0,NULL)
# define SSL_CTX_sess_timeouts(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_TIMEOUTS,0,NULL)
# define SSL_CTX_sess_cache_full(ctx) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SESS_CACHE_FULL,0,NULL)

void SSL_CTX_sess_set_new_cb(SSL_CTX *ctx,
                     int (*new_session_cb) (struct ssl_st *ssl,
                                            SSL_SESSION *sess));
int (*SSL_CTX_sess_get_new_cb(SSL_CTX *ctx)) (struct ssl_st *ssl,
                                      SSL_SESSION *sess);
void SSL_CTX_sess_set_remove_cb(SSL_CTX *ctx,
                        void (*remove_session_cb) (struct ssl_ctx_st
                                                   *ctx,
                                                   SSL_SESSION *sess));
void (*SSL_CTX_sess_get_remove_cb(SSL_CTX *ctx)) (struct ssl_ctx_st *ctx,
                                      SSL_SESSION *sess);
void SSL_CTX_sess_set_get_cb(SSL_CTX *ctx,
                     SSL_SESSION *(*get_session_cb) (struct ssl_st
                                                     *ssl,
                                                     const unsigned char
                                                     *data, int len,
                                                     int *copy));
SSL_SESSION *(*SSL_CTX_sess_get_get_cb(SSL_CTX *ctx)) (struct ssl_st *ssl,
                                       const unsigned char *data,
                                       int len,
 int *copy);
void SSL_CTX_set_info_callback(SSL_CTX *ctx,
```

```
                        void (*cb) (const SSL *ssl, int type, int val));
void (*SSL_CTX_get_info_callback(SSL_CTX *ctx)) (const SSL *ssl, int type,
                                                 int val);
void SSL_CTX_set_client_cert_cb(SSL_CTX *ctx,
                                int (*client_cert_cb) (SSL *ssl, X509 **x509,
                                                       EVP_PKEY **pkey));
int (*SSL_CTX_get_client_cert_cb(SSL_CTX *ctx)) (SSL *ssl, X509 **x509,
                                                 EVP_PKEY **pkey);
# ifndef OPENSSL_NO_ENGINE
__owur int SSL_CTX_set_client_cert_engine(SSL_CTX *ctx, ENGINE *e);
# endif
void SSL_CTX_set_cookie_generate_cb(SSL_CTX *ctx,
                                    int (*app_gen_cookie_cb) (SSL *ssl,
                                                              unsigned char
                                                              *cookie,

                                                              unsigned int
                                                              *cookie_len));
void SSL_CTX_set_cookie_verify_cb(SSL_CTX *ctx,
                                  int (*app_verify_cookie_cb) (SSL *ssl,
                                                               const unsigned
                                                               char *cookie,
                                                               unsigned int
                                                               cookie_len));

void SSL_CTX_set_stateless_cookie_generate_cb(
  SSL_CTX *ctx,
  int (*gen_stateless_cookie_cb) (SSL *ssl,
                                  unsigned char *cookie,
                                  size_t *cookie_len));
void SSL_CTX_set_stateless_cookie_verify_cb(
  SSL_CTX *ctx,
  int (*verify_stateless_cookie_cb) (SSL *ssl,
                                     const unsigned char *cookie,

                                     size_t cookie_len));
# ifndef OPENSSL_NO_NEXTPROTONEG

typedef int (*SSL_CTX_npn_advertised_cb_func)(SSL *ssl,
                                              const unsigned char **out,
                                              unsigned int *outlen,
                                              void *arg);
void SSL_CTX_set_next_protos_advertised_cb(SSL_CTX *s,
                                           SSL_CTX_npn_advertised_cb_func cb,
                                           void *arg);
#  define SSL_CTX_set_npn_advertised_cb SSL_CTX_set_next_protos_advertised_cb

typedef int (*SSL_CTX_npn_select_cb_func)(SSL *s,
```

```
                                unsigned char **out,
                                unsigned char *outlen,
                                const unsigned char *in,
                                unsigned int inlen,
                                void *arg);
void SSL_CTX_set_next_proto_select_cb(SSL_CTX *s,
                               SSL_CTX_npn_select_cb_func cb,
                              void *arg);
#  define SSL_CTX_set_npn_select_cb SSL_CTX_set_next_proto_select_cb

void SSL_get0_next_proto_negotiated(const SSL *s, const unsigned char **data,
                            unsigned *len);
#  define SSL_get0_npn_negotiated SSL_get0_next_proto_negotiated
# endif

__owur int SSL_select_next_proto(unsigned char **out, unsigned char *outlen,
                            const unsigned char *in, unsigned int inlen,
                            const unsigned char *client,
                            unsigned int client_len);

# define OPENSSL_NPN_UNSUPPORTED 0
# define OPENSSL_NPN_NEGOTIATED  1
# define OPENSSL_NPN_NO_OVERLAP  2

__owur int SSL_CTX_set_alpn_protos(SSL_CTX *ctx, const unsigned char *protos,
                            unsigned int protos_len);
__owur int SSL_set_alpn_protos(SSL *ssl, const unsigned char *protos,

                   unsigned int protos_len);
typedef int (*SSL_CTX_alpn_select_cb_func)(SSL *ssl,
                                const unsigned char **out,
                                unsigned char *outlen,
                                const unsigned char *in,
                                unsigned int inlen,
                                void *arg);
void SSL_CTX_set_alpn_select_cb(SSL_CTX *ctx,
                            SSL_CTX_alpn_select_cb_func cb,
                            void *arg);
void SSL_get0_alpn_selected(const SSL *ssl, const unsigned char **data,
                        unsigned int *len);

# ifndef OPENSSL_NO_PSK
/*
* the maximum length of the buffer given to callbacks containing the
* resulting identity/psk
*/
#  define PSK_MAX_IDENTITY_LEN 256
#  define PSK_MAX_PSK_LEN 512
```

```
typedef unsigned int (*SSL_psk_client_cb_func)(SSL *ssl,
                                               const char
 *hint,
                                               char *identity,
                                               unsigned int max_identity_len,
                                               unsigned char *psk,
                                               unsigned int max_psk_len);
void SSL_CTX_set_psk_client_callback(SSL_CTX *ctx, SSL_psk_client_cb_func cb);
void SSL_set_psk_client_callback(SSL *ssl, SSL_psk_client_cb_func cb);

typedef unsigned int (*SSL_psk_server_cb_func)(SSL *ssl,
                                               const char *identity,
                                               unsigned char *psk,
                                               unsigned int max_psk_len);
void SSL_CTX_set_psk_server_callback(SSL_CTX *ctx, SSL_psk_server_cb_func cb);
void SSL_set_psk_server_callback(SSL *ssl, SSL_psk_server_cb_func cb);

__owur int SSL_CTX_use_psk_identity_hint(SSL_CTX *ctx, const char *identity_hint);
__owur int SSL_use_psk_identity_hint(SSL *s, const char *identity_hint);
const
 char *SSL_get_psk_identity_hint(const SSL *s);
const char *SSL_get_psk_identity(const SSL *s);
# endif

typedef int (*SSL_psk_find_session_cb_func)(SSL *ssl,
                                            const unsigned char *identity,
                                            size_t identity_len,
                                            SSL_SESSION **sess);
typedef int (*SSL_psk_use_session_cb_func)(SSL *ssl, const EVP_MD *md,
                                           const unsigned char **id,
                                           size_t *idlen,
                                           SSL_SESSION **sess);

void SSL_set_psk_find_session_callback(SSL *s, SSL_psk_find_session_cb_func cb);
void SSL_CTX_set_psk_find_session_callback(SSL_CTX *ctx,
                                           SSL_psk_find_session_cb_func cb);
void SSL_set_psk_use_session_callback(SSL *s, SSL_psk_use_session_cb_func cb);
void SSL_CTX_set_psk_use_session_callback(SSL_CTX *ctx,

                                          SSL_psk_use_session_cb_func cb);

/* Register callbacks to handle custom TLS Extensions for client or server. */

__owur int SSL_CTX_has_client_custom_ext(const SSL_CTX *ctx,
                                         unsigned int ext_type);

__owur int SSL_CTX_add_client_custom_ext(SSL_CTX *ctx,
                                         unsigned int ext_type,
```

```
                            custom_ext_add_cb add_cb,
                            custom_ext_free_cb free_cb,
                            void *add_arg,
                            custom_ext_parse_cb parse_cb,
                            void *parse_arg);

__owur int SSL_CTX_add_server_custom_ext(SSL_CTX *ctx,
                            unsigned int ext_type,
                            custom_ext_add_cb add_cb,
                            custom_ext_free_cb free_cb,

                void *add_arg,
                            custom_ext_parse_cb parse_cb,
                            void *parse_arg);

__owur int SSL_CTX_add_custom_ext(SSL_CTX *ctx, unsigned int ext_type,
                            unsigned int context,
                            SSL_custom_ext_add_cb_ex add_cb,
                            SSL_custom_ext_free_cb_ex free_cb,
                            void *add_arg,
                            SSL_custom_ext_parse_cb_ex parse_cb,
                            void *parse_arg);

__owur int SSL_extension_supported(unsigned int ext_type);

# define SSL_NOTHING            1
# define SSL_WRITING            2
# define SSL_READING            3
# define SSL_X509_LOOKUP        4
# define SSL_ASYNC_PAUSED       5
# define SSL_ASYNC_NO_JOBS      6
# define SSL_CLIENT_HELLO_CB    7
# define SSL_RETRY_VERIFY       8

/* These will only be used when doing non-blocking IO */
# define SSL_want_nothing(s)
        (SSL_want(s) == SSL_NOTHING)
# define SSL_want_read(s)           (SSL_want(s) == SSL_READING)
# define SSL_want_write(s)          (SSL_want(s) == SSL_WRITING)
# define SSL_want_x509_lookup(s)    (SSL_want(s) == SSL_X509_LOOKUP)
# define SSL_want_retry_verify(s)   (SSL_want(s) == SSL_RETRY_VERIFY)
# define SSL_want_async(s)          (SSL_want(s) == SSL_ASYNC_PAUSED)
# define SSL_want_async_job(s)      (SSL_want(s) == SSL_ASYNC_NO_JOBS)
# define SSL_want_client_hello_cb(s) (SSL_want(s) == SSL_CLIENT_HELLO_CB)

# define SSL_MAC_FLAG_READ_MAC_STREAM 1
# define SSL_MAC_FLAG_WRITE_MAC_STREAM 2
# define SSL_MAC_FLAG_READ_MAC_TLSTREE 4
```

```
# define SSL_MAC_FLAG_WRITE_MAC_TLSTREE 8

/*
* A callback for logging out TLS key material. This callback should log out
* |line| followed by a newline.
*/
typedef void (*SSL_CTX_keylog_cb_func)(const SSL *ssl, const char *line);

/*
* SSL_CTX_set_keylog_callback configures a callback to log key material. This
* is intended
 for debugging use with tools like Wireshark. The cb function
* should log line followed by a newline.
*/
void SSL_CTX_set_keylog_callback(SSL_CTX *ctx, SSL_CTX_keylog_cb_func cb);

/*
* SSL_CTX_get_keylog_callback returns the callback configured by
* SSL_CTX_set_keylog_callback.
*/
SSL_CTX_keylog_cb_func SSL_CTX_get_keylog_callback(const SSL_CTX *ctx);

int SSL_CTX_set_max_early_data(SSL_CTX *ctx, uint32_t max_early_data);
uint32_t SSL_CTX_get_max_early_data(const SSL_CTX *ctx);
int SSL_set_max_early_data(SSL *s, uint32_t max_early_data);
uint32_t SSL_get_max_early_data(const SSL *s);
int SSL_CTX_set_recv_max_early_data(SSL_CTX *ctx, uint32_t recv_max_early_data);
uint32_t SSL_CTX_get_recv_max_early_data(const SSL_CTX *ctx);
int SSL_set_recv_max_early_data(SSL *s, uint32_t recv_max_early_data);
uint32_t SSL_get_recv_max_early_data(const SSL *s);

#ifdef __cplusplus
}
#endif

# include <openssl/ssl2.h>
# include <openssl/ssl3.h>
# include <openssl/tls1.h>      /* This is mostly sslv3
 with a few tweaks */
# include <openssl/dtls1.h>     /* Datagram TLS */
# include <openssl/srtp.h>      /* Support for the use_srtp extension */

#ifdef  __cplusplus
extern "C" {
#endif

/*
* These need to be after the above set of includes due to a compiler bug
```

```
* in VisualStudio 2015
*/
SKM_DEFINE_STACK_OF_INTERNAL(SSL_CIPHER, const SSL_CIPHER, SSL_CIPHER)
#define sk_SSL_CIPHER_num(sk) OPENSSL_sk_num(ossl_check_const_SSL_CIPHER_sk_type(sk))
#define sk_SSL_CIPHER_value(sk, idx) ((const SSL_CIPHER
*)OPENSSL_sk_value(ossl_check_const_SSL_CIPHER_sk_type(sk), (idx)))
#define sk_SSL_CIPHER_new(cmp) ((STACK_OF(SSL_CIPHER)
*)OPENSSL_sk_new(ossl_check_SSL_CIPHER_compfunc_type(cmp)))
#define sk_SSL_CIPHER_new_null() ((STACK_OF(SSL_CIPHER) *)OPENSSL_sk_new_null())
#define sk_SSL_CIPHER_new_reserve(cmp, n) ((STACK_OF(SSL_CIPHER)
*)OPENSSL_sk_new_reserve(ossl_check_SSL_CIPHER_compfunc_type(cmp), (n)))
#define sk_SSL_CIPHER_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_SSL_CIPHER_sk_type(sk),
 (n))
#define sk_SSL_CIPHER_free(sk) OPENSSL_sk_free(ossl_check_SSL_CIPHER_sk_type(sk))
#define sk_SSL_CIPHER_zero(sk) OPENSSL_sk_zero(ossl_check_SSL_CIPHER_sk_type(sk))
#define sk_SSL_CIPHER_delete(sk, i) ((const SSL_CIPHER
*)OPENSSL_sk_delete(ossl_check_SSL_CIPHER_sk_type(sk), (i)))
#define sk_SSL_CIPHER_delete_ptr(sk, ptr) ((const SSL_CIPHER
*)OPENSSL_sk_delete_ptr(ossl_check_SSL_CIPHER_sk_type(sk), ossl_check_SSL_CIPHER_type(ptr)))
#define sk_SSL_CIPHER_push(sk, ptr) OPENSSL_sk_push(ossl_check_SSL_CIPHER_sk_type(sk),
ossl_check_SSL_CIPHER_type(ptr))
#define sk_SSL_CIPHER_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_SSL_CIPHER_sk_type(sk),
ossl_check_SSL_CIPHER_type(ptr))
#define sk_SSL_CIPHER_pop(sk) ((const SSL_CIPHER
*)OPENSSL_sk_pop(ossl_check_SSL_CIPHER_sk_type(sk)))
#define sk_SSL_CIPHER_shift(sk) ((const SSL_CIPHER
*)OPENSSL_sk_shift(ossl_check_SSL_CIPHER_sk_type(sk)))
#define sk_SSL_CIPHER_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_SSL_CIPHER_sk_type(sk),ossl_check_SSL_CIPHER_freefunc_type(freefunc
))
#define
 sk_SSL_CIPHER_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_SSL_CIPHER_sk_type(sk),
ossl_check_SSL_CIPHER_type(ptr), (idx))
#define sk_SSL_CIPHER_set(sk, idx, ptr) ((const SSL_CIPHER
*)OPENSSL_sk_set(ossl_check_SSL_CIPHER_sk_type(sk), (idx), ossl_check_SSL_CIPHER_type(ptr)))
#define sk_SSL_CIPHER_find(sk, ptr) OPENSSL_sk_find(ossl_check_SSL_CIPHER_sk_type(sk),
ossl_check_SSL_CIPHER_type(ptr))
#define sk_SSL_CIPHER_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_SSL_CIPHER_sk_type(sk),
ossl_check_SSL_CIPHER_type(ptr))
#define sk_SSL_CIPHER_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_SSL_CIPHER_sk_type(sk),
ossl_check_SSL_CIPHER_type(ptr), pnum)
#define sk_SSL_CIPHER_sort(sk) OPENSSL_sk_sort(ossl_check_SSL_CIPHER_sk_type(sk))
#define sk_SSL_CIPHER_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_SSL_CIPHER_sk_type(sk))
#define sk_SSL_CIPHER_dup(sk) ((STACK_OF(SSL_CIPHER)
*)OPENSSL_sk_dup(ossl_check_const_SSL_CIPHER_sk_type(sk)))
#define
 sk_SSL_CIPHER_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(SSL_CIPHER)
*)OPENSSL_sk_deep_copy(ossl_check_const_SSL_CIPHER_sk_type(sk),
```

ossl_check_SSL_CIPHER_copyfunc_type(copyfunc), ossl_check_SSL_CIPHER_freefunc_type(freefunc)))
#define sk_SSL_CIPHER_set_cmp_func(sk, cmp)
((sk_SSL_CIPHER_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_SSL_CIPHER_sk_type(sk),
ossl_check_SSL_CIPHER_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(SSL_COMP, SSL_COMP, SSL_COMP)
#define sk_SSL_COMP_num(sk) OPENSSL_sk_num(ossl_check_const_SSL_COMP_sk_type(sk))
#define sk_SSL_COMP_value(sk, idx) ((SSL_COMP
*)OPENSSL_sk_value(ossl_check_const_SSL_COMP_sk_type(sk), (idx)))
#define sk_SSL_COMP_new(cmp) ((STACK_OF(SSL_COMP)
*)OPENSSL_sk_new(ossl_check_SSL_COMP_compfunc_type(cmp)))
#define sk_SSL_COMP_new_null() ((STACK_OF(SSL_COMP) *)OPENSSL_sk_new_null())
#define sk_SSL_COMP_new_reserve(cmp, n) ((STACK_OF(SSL_COMP)
*)OPENSSL_sk_new_reserve(ossl_check_SSL_COMP_compfunc_type(cmp), (n)))
#define sk_SSL_COMP_reserve(sk,
n) OPENSSL_sk_reserve(ossl_check_SSL_COMP_sk_type(sk), (n))
#define sk_SSL_COMP_free(sk) OPENSSL_sk_free(ossl_check_SSL_COMP_sk_type(sk))
#define sk_SSL_COMP_zero(sk) OPENSSL_sk_zero(ossl_check_SSL_COMP_sk_type(sk))
#define sk_SSL_COMP_delete(sk, i) ((SSL_COMP *)OPENSSL_sk_delete(ossl_check_SSL_COMP_sk_type(sk),
(i)))
#define sk_SSL_COMP_delete_ptr(sk, ptr) ((SSL_COMP
*)OPENSSL_sk_delete_ptr(ossl_check_SSL_COMP_sk_type(sk), ossl_check_SSL_COMP_type(ptr)))
#define sk_SSL_COMP_push(sk, ptr) OPENSSL_sk_push(ossl_check_SSL_COMP_sk_type(sk),
ossl_check_SSL_COMP_type(ptr))
#define sk_SSL_COMP_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_SSL_COMP_sk_type(sk),
ossl_check_SSL_COMP_type(ptr))
#define sk_SSL_COMP_pop(sk) ((SSL_COMP *)OPENSSL_sk_pop(ossl_check_SSL_COMP_sk_type(sk)))
#define sk_SSL_COMP_shift(sk) ((SSL_COMP *)OPENSSL_sk_shift(ossl_check_SSL_COMP_sk_type(sk)))
#define sk_SSL_COMP_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_SSL_COMP_sk_type(sk),ossl_check_SSL_COMP_freefunc_type(freefunc))
#define
sk_SSL_COMP_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_SSL_COMP_sk_type(sk),
ossl_check_SSL_COMP_type(ptr), (idx))
#define sk_SSL_COMP_set(sk, idx, ptr) ((SSL_COMP *)OPENSSL_sk_set(ossl_check_SSL_COMP_sk_type(sk),
(idx), ossl_check_SSL_COMP_type(ptr)))
#define sk_SSL_COMP_find(sk, ptr) OPENSSL_sk_find(ossl_check_SSL_COMP_sk_type(sk),
ossl_check_SSL_COMP_type(ptr))
#define sk_SSL_COMP_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_SSL_COMP_sk_type(sk),
ossl_check_SSL_COMP_type(ptr))
#define sk_SSL_COMP_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_SSL_COMP_sk_type(sk),
ossl_check_SSL_COMP_type(ptr), pnum)
#define sk_SSL_COMP_sort(sk) OPENSSL_sk_sort(ossl_check_SSL_COMP_sk_type(sk))
#define sk_SSL_COMP_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_SSL_COMP_sk_type(sk))
#define sk_SSL_COMP_dup(sk) ((STACK_OF(SSL_COMP)
*)OPENSSL_sk_dup(ossl_check_const_SSL_COMP_sk_type(sk)))
#define sk_SSL_COMP_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(SSL_COMP) *)OPENSSL_sk_deep_copy(ossl_check_const_SSL_COMP_sk_type(sk),
ossl_check_SSL_COMP_copyfunc_type(copyfunc), ossl_check_SSL_COMP_freefunc_type(freefunc)))
#define sk_SSL_COMP_set_cmp_func(sk, cmp)

```
((sk_SSL_COMP_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_SSL_COMP_sk_type(sk),
ossl_check_SSL_COMP_compfunc_type(cmp)))


/* compatibility */
# define SSL_set_app_data(s,arg)         (SSL_set_ex_data(s,0,(char *)(arg)))
# define SSL_get_app_data(s)             (SSL_get_ex_data(s,0))
# define SSL_SESSION_set_app_data(s,a)   (SSL_SESSION_set_ex_data(s,0, \
                                          (char *)(a)))
# define SSL_SESSION_get_app_data(s)     (SSL_SESSION_get_ex_data(s,0))
# define SSL_CTX_get_app_data(ctx)       (SSL_CTX_get_ex_data(ctx,0))
# define SSL_CTX_set_app_data(ctx,arg)   (SSL_CTX_set_ex_data(ctx,0, \
                                         (char *)(arg)))
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0
 void SSL_set_debug(SSL *s, int debug);
# endif

/* TLSv1.3 KeyUpdate message types */
/* -1 used so that this is an invalid value for the on-the-wire protocol */
#define SSL_KEY_UPDATE_NONE             -1
/* Values as defined for the on-the-wire protocol */
#define SSL_KEY_UPDATE_NOT_REQUESTED     0
#define SSL_KEY_UPDATE_REQUESTED         1

/*
* The valid handshake states (one for each type message sent and one for each
* type of message received). There are also two "special" states:
* TLS = TLS or DTLS state
* DTLS = DTLS specific state
* CR/SR = Client Read/Server Read
* CW/SW = Client Write/Server Write
*
* The "special" states are:
* TLS_ST_BEFORE = No handshake has been initiated yet
* TLS_ST_OK = A handshake has been successfully completed
*/
typedef enum {
  TLS_ST_BEFORE,
  TLS_ST_OK,
  DTLS_ST_CR_HELLO_VERIFY_REQUEST,
  TLS_ST_CR_SRVR_HELLO,
  TLS_ST_CR_CERT,
  TLS_ST_CR_CERT_STATUS,
  TLS_ST_CR_KEY_EXCH,
  TLS_ST_CR_CERT_REQ,
  TLS_ST_CR_SRVR_DONE,
```

```
    TLS_ST_CR_SESSION_TICKET,
    TLS_ST_CR_CHANGE,
    TLS_ST_CR_FINISHED,
    TLS_ST_CW_CLNT_HELLO,
    TLS_ST_CW_CERT,
    TLS_ST_CW_KEY_EXCH,
    TLS_ST_CW_CERT_VRFY,
    TLS_ST_CW_CHANGE,
    TLS_ST_CW_NEXT_PROTO,
    TLS_ST_CW_FINISHED,
    TLS_ST_SW_HELLO_REQ,
    TLS_ST_SR_CLNT_HELLO,
    DTLS_ST_SW_HELLO_VERIFY_REQUEST,
    TLS_ST_SW_SRVR_HELLO,
    TLS_ST_SW_CERT,
    TLS_ST_SW_KEY_EXCH,
    TLS_ST_SW_CERT_REQ,
    TLS_ST_SW_SRVR_DONE,
    TLS_ST_SR_CERT,
    TLS_ST_SR_KEY_EXCH,
    TLS_ST_SR_CERT_VRFY,
    TLS_ST_SR_NEXT_PROTO,
    TLS_ST_SR_CHANGE,
    TLS_ST_SR_FINISHED,
    TLS_ST_SW_SESSION_TICKET,
    TLS_ST_SW_CERT_STATUS,
    TLS_ST_SW_CHANGE,
    TLS_ST_SW_FINISHED,
    TLS_ST_SW_ENCRYPTED_EXTENSIONS,
    TLS_ST_CR_ENCRYPTED_EXTENSIONS,
    TLS_ST_CR_CERT_VRFY,
    TLS_ST_SW_CERT_VRFY,
    TLS_ST_CR_HELLO_REQ,
    TLS_ST_SW_KEY_UPDATE,
    TLS_ST_CW_KEY_UPDATE,
    TLS_ST_SR_KEY_UPDATE,
    TLS_ST_CR_KEY_UPDATE,
    TLS_ST_EARLY_DATA,
    TLS_ST_PENDING_EARLY_DATA_END,
    TLS_ST_CW_END_OF_EARLY_DATA,
    TLS_ST_SR_END_OF_EARLY_DATA
} OSSL_HANDSHAKE_STATE;

/*
* Most of the following state values are no longer used and are defined to be
* the closest equivalent value in the current state machine code. Not all
* defines have an equivalent and are set to a dummy value (-1). SSL_ST_CONNECT
* and SSL_ST_ACCEPT are still in use in the definition of SSL_CB_ACCEPT_LOOP,
```

```
* SSL_CB_ACCEPT_EXIT, SSL_CB_CONNECT_LOOP and SSL_CB_CONNECT_EXIT.
*/

# define SSL_ST_CONNECT                0x1000
# define SSL_ST_ACCEPT                 0x2000

# define SSL_ST_MASK                   0x0FFF

# define SSL_CB_LOOP                   0x01
# define SSL_CB_EXIT                   0x02
# define SSL_CB_READ                   0x04
# define SSL_CB_WRITE                  0x08
# define SSL_CB_ALERT                  0x4000/* used in callback */
# define SSL_CB_READ_ALERT             (SSL_CB_ALERT|SSL_CB_READ)
# define SSL_CB_WRITE_ALERT
    (SSL_CB_ALERT|SSL_CB_WRITE)
# define SSL_CB_ACCEPT_LOOP            (SSL_ST_ACCEPT|SSL_CB_LOOP)
# define SSL_CB_ACCEPT_EXIT            (SSL_ST_ACCEPT|SSL_CB_EXIT)
# define SSL_CB_CONNECT_LOOP           (SSL_ST_CONNECT|SSL_CB_LOOP)
# define SSL_CB_CONNECT_EXIT           (SSL_ST_CONNECT|SSL_CB_EXIT)
# define SSL_CB_HANDSHAKE_START        0x10
# define SSL_CB_HANDSHAKE_DONE         0x20

/* Is the SSL_connection established? */
# define SSL_in_connect_init(a)        (SSL_in_init(a) && !SSL_is_server(a))
# define SSL_in_accept_init(a)         (SSL_in_init(a) && SSL_is_server(a))
int SSL_in_init(const SSL *s);
int SSL_in_before(const SSL *s);
int SSL_is_init_finished(const SSL *s);

/*
* The following 3 states are kept in ssl->rlayer.rstate when reads fail, you
* should not need these
*/
# define SSL_ST_READ_HEADER                0xF0
# define SSL_ST_READ_BODY                  0xF1
# define SSL_ST_READ_DONE                  0xF2

/*-
* Obtain latest
 Finished message
*   -- that we sent (SSL_get_finished)
*   -- that we expected from peer (SSL_get_peer_finished).
* Returns length (0 == no Finished so far), copies up to 'count' bytes.
*/
size_t SSL_get_finished(const SSL *s, void *buf, size_t count);
size_t SSL_get_peer_finished(const SSL *s, void *buf, size_t count);
```

```
/*
* use either SSL_VERIFY_NONE or SSL_VERIFY_PEER, the last 3 options are
* 'ored' with SSL_VERIFY_PEER if they are desired
*/
# define SSL_VERIFY_NONE                 0x00
# define SSL_VERIFY_PEER                 0x01
# define SSL_VERIFY_FAIL_IF_NO_PEER_CERT 0x02
# define SSL_VERIFY_CLIENT_ONCE          0x04
# define SSL_VERIFY_POST_HANDSHAKE       0x08

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define OpenSSL_add_ssl_algorithms()   SSL_library_init()
#  define SSLeay_add_ssl_algorithms()    SSL_library_init()
# endif

/* More backward compatibility */
# define SSL_get_cipher(s) \
            SSL_CIPHER_get_name(SSL_get_current_cipher(s))
# define SSL_get_cipher_bits(s,np)
 \
            SSL_CIPHER_get_bits(SSL_get_current_cipher(s),np)
# define SSL_get_cipher_version(s) \
            SSL_CIPHER_get_version(SSL_get_current_cipher(s))
# define SSL_get_cipher_name(s) \
            SSL_CIPHER_get_name(SSL_get_current_cipher(s))
# define SSL_get_time(a)         SSL_SESSION_get_time(a)
# define SSL_set_time(a,b)       SSL_SESSION_set_time((a),(b))
# define SSL_get_timeout(a)      SSL_SESSION_get_timeout(a)
# define SSL_set_timeout(a,b)    SSL_SESSION_set_timeout((a),(b))

# define d2i_SSL_SESSION_bio(bp,s_id)
ASN1_d2i_bio_of(SSL_SESSION,SSL_SESSION_new,d2i_SSL_SESSION,bp,s_id)
# define i2d_SSL_SESSION_bio(bp,s_id) ASN1_i2d_bio_of(SSL_SESSION,i2d_SSL_SESSION,bp,s_id)

DECLARE_PEM_rw(SSL_SESSION, SSL_SESSION)
# define SSL_AD_REASON_OFFSET           1000/* offset to get SSL_R_... value
                                * from SSL_AD_... */
/* These alert types are for SSLv3 and TLSv1 */
# define SSL_AD_CLOSE_NOTIFY
     SSL3_AD_CLOSE_NOTIFY
/* fatal */
# define SSL_AD_UNEXPECTED_MESSAGE       SSL3_AD_UNEXPECTED_MESSAGE
/* fatal */
# define SSL_AD_BAD_RECORD_MAC          SSL3_AD_BAD_RECORD_MAC
# define SSL_AD_DECRYPTION_FAILED       TLS1_AD_DECRYPTION_FAILED
# define SSL_AD_RECORD_OVERFLOW         TLS1_AD_RECORD_OVERFLOW
/* fatal */
# define SSL_AD_DECOMPRESSION_FAILURE    SSL3_AD_DECOMPRESSION_FAILURE
```

```
/* fatal */
# define SSL_AD_HANDSHAKE_FAILURE       SSL3_AD_HANDSHAKE_FAILURE
/* Not for TLS */
# define SSL_AD_NO_CERTIFICATE          SSL3_AD_NO_CERTIFICATE
# define SSL_AD_BAD_CERTIFICATE         SSL3_AD_BAD_CERTIFICATE
# define SSL_AD_UNSUPPORTED_CERTIFICATE  SSL3_AD_UNSUPPORTED_CERTIFICATE
# define SSL_AD_CERTIFICATE_REVOKED      SSL3_AD_CERTIFICATE_REVOKED
# define SSL_AD_CERTIFICATE_EXPIRED      SSL3_AD_CERTIFICATE_EXPIRED
# define SSL_AD_CERTIFICATE_UNKNOWN      SSL3_AD_CERTIFICATE_UNKNOWN
/* fatal */
# define SSL_AD_ILLEGAL_PARAMETER       SSL3_AD_ILLEGAL_PARAMETER
/* fatal */
# define
 SSL_AD_UNKNOWN_CA             TLS1_AD_UNKNOWN_CA
/* fatal */
# define SSL_AD_ACCESS_DENIED           TLS1_AD_ACCESS_DENIED
/* fatal */
# define SSL_AD_DECODE_ERROR            TLS1_AD_DECODE_ERROR
# define SSL_AD_DECRYPT_ERROR           TLS1_AD_DECRYPT_ERROR
/* fatal */
# define SSL_AD_EXPORT_RESTRICTION      TLS1_AD_EXPORT_RESTRICTION
/* fatal */
# define SSL_AD_PROTOCOL_VERSION        TLS1_AD_PROTOCOL_VERSION
/* fatal */
# define SSL_AD_INSUFFICIENT_SECURITY    TLS1_AD_INSUFFICIENT_SECURITY
/* fatal */
# define SSL_AD_INTERNAL_ERROR          TLS1_AD_INTERNAL_ERROR
# define SSL_AD_USER_CANCELLED          TLS1_AD_USER_CANCELLED
# define SSL_AD_NO_RENEGOTIATION         TLS1_AD_NO_RENEGOTIATION
# define SSL_AD_MISSING_EXTENSION        TLS13_AD_MISSING_EXTENSION
# define SSL_AD_CERTIFICATE_REQUIRED     TLS13_AD_CERTIFICATE_REQUIRED
# define SSL_AD_UNSUPPORTED_EXTENSION    TLS1_AD_UNSUPPORTED_EXTENSION
# define SSL_AD_CERTIFICATE_UNOBTAINABLE TLS1_AD_CERTIFICATE_UNOBTAINABLE
#
 define SSL_AD_UNRECOGNIZED_NAME        TLS1_AD_UNRECOGNIZED_NAME
# define SSL_AD_BAD_CERTIFICATE_STATUS_RESPONSE
TLS1_AD_BAD_CERTIFICATE_STATUS_RESPONSE
# define SSL_AD_BAD_CERTIFICATE_HASH_VALUE TLS1_AD_BAD_CERTIFICATE_HASH_VALUE
/* fatal */
# define SSL_AD_UNKNOWN_PSK_IDENTITY     TLS1_AD_UNKNOWN_PSK_IDENTITY
/* fatal */
# define SSL_AD_INAPPROPRIATE_FALLBACK   TLS1_AD_INAPPROPRIATE_FALLBACK
# define SSL_AD_NO_APPLICATION_PROTOCOL  TLS1_AD_NO_APPLICATION_PROTOCOL
# define SSL_ERROR_NONE                 0
# define SSL_ERROR_SSL                  1
# define SSL_ERROR_WANT_READ            2
# define SSL_ERROR_WANT_WRITE           3
# define SSL_ERROR_WANT_X509_LOOKUP      4
```

```
# define SSL_ERROR_SYSCALL              5/* look at error stack/return
                                 * value/errno */
# define SSL_ERROR_ZERO_RETURN          6
# define SSL_ERROR_WANT_CONNECT         7
# define SSL_ERROR_WANT_ACCEPT          8
# define SSL_ERROR_WANT_ASYNC           9
# define SSL_ERROR_WANT_ASYNC_JOB
      10
# define SSL_ERROR_WANT_CLIENT_HELLO_CB 11
# define SSL_ERROR_WANT_RETRY_VERIFY    12

# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define SSL_CTRL_SET_TMP_DH                 3
#  define SSL_CTRL_SET_TMP_ECDH               4
#  define SSL_CTRL_SET_TMP_DH_CB              6
# endif

# define SSL_CTRL_GET_CLIENT_CERT_REQUEST       9
# define SSL_CTRL_GET_NUM_RENEGOTIATIONS        10
# define SSL_CTRL_CLEAR_NUM_RENEGOTIATIONS      11
# define SSL_CTRL_GET_TOTAL_RENEGOTIATIONS      12
# define SSL_CTRL_GET_FLAGS                     13
# define SSL_CTRL_EXTRA_CHAIN_CERT              14
# define SSL_CTRL_SET_MSG_CALLBACK              15
# define SSL_CTRL_SET_MSG_CALLBACK_ARG          16
/* only applies to datagram connections */
# define SSL_CTRL_SET_MTU               17
/* Stats */
# define SSL_CTRL_SESS_NUMBER                   20
# define SSL_CTRL_SESS_CONNECT                  21
# define SSL_CTRL_SESS_CONNECT_GOOD             22
# define SSL_CTRL_SESS_CONNECT_RENEGOTIATE
      23
# define SSL_CTRL_SESS_ACCEPT                   24
# define SSL_CTRL_SESS_ACCEPT_GOOD              25
# define SSL_CTRL_SESS_ACCEPT_RENEGOTIATE       26
# define SSL_CTRL_SESS_HIT                      27
# define SSL_CTRL_SESS_CB_HIT                   28
# define SSL_CTRL_SESS_MISSES                   29
# define SSL_CTRL_SESS_TIMEOUTS                 30
# define SSL_CTRL_SESS_CACHE_FULL               31
# define SSL_CTRL_MODE                          33
# define SSL_CTRL_GET_READ_AHEAD                40
# define SSL_CTRL_SET_READ_AHEAD                41
# define SSL_CTRL_SET_SESS_CACHE_SIZE           42
# define SSL_CTRL_GET_SESS_CACHE_SIZE           43
# define SSL_CTRL_SET_SESS_CACHE_MODE           44
# define SSL_CTRL_GET_SESS_CACHE_MODE           45
```

```
# define SSL_CTRL_GET_MAX_CERT_LIST            50
# define SSL_CTRL_SET_MAX_CERT_LIST            51
# define SSL_CTRL_SET_MAX_SEND_FRAGMENT        52
/* see tls1.h for macros based
 on these */
# define SSL_CTRL_SET_TLSEXT_SERVERNAME_CB      53
# define SSL_CTRL_SET_TLSEXT_SERVERNAME_ARG     54
# define SSL_CTRL_SET_TLSEXT_HOSTNAME          55
# define SSL_CTRL_SET_TLSEXT_DEBUG_CB          56
# define SSL_CTRL_SET_TLSEXT_DEBUG_ARG         57
# define SSL_CTRL_GET_TLSEXT_TICKET_KEYS       58
# define SSL_CTRL_SET_TLSEXT_TICKET_KEYS       59
/*# define SSL_CTRL_SET_TLSEXT_OPAQUE_PRF_INPUT    60 */
/*# define SSL_CTRL_SET_TLSEXT_OPAQUE_PRF_INPUT_CB 61 */
/*# define SSL_CTRL_SET_TLSEXT_OPAQUE_PRF_INPUT_CB_ARG 62 */
# define SSL_CTRL_SET_TLSEXT_STATUS_REQ_CB      63
# define SSL_CTRL_SET_TLSEXT_STATUS_REQ_CB_ARG   64
# define SSL_CTRL_SET_TLSEXT_STATUS_REQ_TYPE     65
# define SSL_CTRL_GET_TLSEXT_STATUS_REQ_EXTS     66
# define SSL_CTRL_SET_TLSEXT_STATUS_REQ_EXTS     67
# define SSL_CTRL_GET_TLSEXT_STATUS_REQ_IDS      68
# define SSL_CTRL_SET_TLSEXT_STATUS_REQ_IDS      69
# define SSL_CTRL_GET_TLSEXT_STATUS_REQ_OCSP_RESP        70
# define SSL_CTRL_SET_TLSEXT_STATUS_REQ_OCSP_RESP
       71
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define SSL_CTRL_SET_TLSEXT_TICKET_KEY_CB      72
# endif
# define SSL_CTRL_SET_TLS_EXT_SRP_USERNAME_CB    75
# define SSL_CTRL_SET_SRP_VERIFY_PARAM_CB              76
# define SSL_CTRL_SET_SRP_GIVE_CLIENT_PWD_CB           77
# define SSL_CTRL_SET_SRP_ARG           78
# define SSL_CTRL_SET_TLS_EXT_SRP_USERNAME             79
# define SSL_CTRL_SET_TLS_EXT_SRP_STRENGTH             80
# define SSL_CTRL_SET_TLS_EXT_SRP_PASSWORD             81
# define DTLS_CTRL_GET_TIMEOUT          73
# define DTLS_CTRL_HANDLE_TIMEOUT       74
# define SSL_CTRL_GET_RI_SUPPORT               76
# define SSL_CTRL_CLEAR_MODE                   78
# define SSL_CTRL_SET_NOT_RESUMABLE_SESS_CB      79
# define SSL_CTRL_GET_EXTRA_CHAIN_CERTS         82
# define SSL_CTRL_CLEAR_EXTRA_CHAIN_CERTS       83
# define SSL_CTRL_CHAIN                       88
# define SSL_CTRL_CHAIN_CERT                  89
# define SSL_CTRL_GET_GROUPS
                90
# define SSL_CTRL_SET_GROUPS                  91
# define SSL_CTRL_SET_GROUPS_LIST             92
```

```
# define SSL_CTRL_GET_SHARED_GROUP             93
# define SSL_CTRL_SET_SIGALGS                  97
# define SSL_CTRL_SET_SIGALGS_LIST             98
# define SSL_CTRL_CERT_FLAGS                   99
# define SSL_CTRL_CLEAR_CERT_FLAGS             100
# define SSL_CTRL_SET_CLIENT_SIGALGS           101
# define SSL_CTRL_SET_CLIENT_SIGALGS_LIST      102
# define SSL_CTRL_GET_CLIENT_CERT_TYPES        103
# define SSL_CTRL_SET_CLIENT_CERT_TYPES        104
# define SSL_CTRL_BUILD_CERT_CHAIN             105
# define SSL_CTRL_SET_VERIFY_CERT_STORE        106
# define SSL_CTRL_SET_CHAIN_CERT_STORE         107
# define SSL_CTRL_GET_PEER_SIGNATURE_NID       108
# define SSL_CTRL_GET_PEER_TMP_KEY             109
# define SSL_CTRL_GET_RAW_CIPHERLIST           110
# define SSL_CTRL_GET_EC_POINT_FORMATS         111
# define SSL_CTRL_GET_CHAIN_CERTS
          115
# define SSL_CTRL_SELECT_CURRENT_CERT          116
# define SSL_CTRL_SET_CURRENT_CERT             117
# define SSL_CTRL_SET_DH_AUTO                  118
# define DTLS_CTRL_SET_LINK_MTU                120
# define DTLS_CTRL_GET_LINK_MIN_MTU            121
# define SSL_CTRL_GET_EXTMS_SUPPORT            122
# define SSL_CTRL_SET_MIN_PROTO_VERSION        123
# define SSL_CTRL_SET_MAX_PROTO_VERSION        124
# define SSL_CTRL_SET_SPLIT_SEND_FRAGMENT      125
# define SSL_CTRL_SET_MAX_PIPELINES            126
# define SSL_CTRL_GET_TLSEXT_STATUS_REQ_TYPE   127
# define SSL_CTRL_GET_TLSEXT_STATUS_REQ_CB     128
# define SSL_CTRL_GET_TLSEXT_STATUS_REQ_CB_ARG 129
# define SSL_CTRL_GET_MIN_PROTO_VERSION        130
# define SSL_CTRL_GET_MAX_PROTO_VERSION        131
# define SSL_CTRL_GET_SIGNATURE_NID            132
# define SSL_CTRL_GET_TMP_KEY                  133
# define SSL_CTRL_GET_NEGOTIATED_GROUP         134
# define SSL_CTRL_SET_RETRY_VERIFY
          136
# define SSL_CTRL_GET_VERIFY_CERT_STORE        137
# define SSL_CTRL_GET_CHAIN_CERT_STORE         138
# define SSL_CERT_SET_FIRST                    1
# define SSL_CERT_SET_NEXT                     2
# define SSL_CERT_SET_SERVER                   3
# define DTLSv1_get_timeout(ssl, arg) \
     SSL_ctrl(ssl,DTLS_CTRL_GET_TIMEOUT,0, (void *)(arg))
# define DTLSv1_handle_timeout(ssl) \
     SSL_ctrl(ssl,DTLS_CTRL_HANDLE_TIMEOUT,0, NULL)
# define SSL_num_renegotiations(ssl) \
```

```
        SSL_ctrl((ssl),SSL_CTRL_GET_NUM_RENEGOTIATIONS,0,NULL)
# define SSL_clear_num_renegotiations(ssl) \
        SSL_ctrl((ssl),SSL_CTRL_CLEAR_NUM_RENEGOTIATIONS,0,NULL)
# define SSL_total_renegotiations(ssl) \
        SSL_ctrl((ssl),SSL_CTRL_GET_TOTAL_RENEGOTIATIONS,0,NULL)
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define SSL_CTX_set_tmp_dh(ctx,dh) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_SET_TMP_DH,0,(char *)(dh))
# endif
# define SSL_CTX_set_dh_auto(ctx, onoff) \
         SSL_CTX_ctrl(ctx,SSL_CTRL_SET_DH_AUTO,onoff,NULL)
# define SSL_set_dh_auto(s, onoff) \
        SSL_ctrl(s,SSL_CTRL_SET_DH_AUTO,onoff,NULL)
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define SSL_set_tmp_dh(ssl,dh) \
        SSL_ctrl(ssl,SSL_CTRL_SET_TMP_DH,0,(char *)(dh))
# endif
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define SSL_CTX_set_tmp_ecdh(ctx,ecdh) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_SET_TMP_ECDH,0,(char *)(ecdh))
#  define SSL_set_tmp_ecdh(ssl,ecdh) \
        SSL_ctrl(ssl,SSL_CTRL_SET_TMP_ECDH,0,(char *)(ecdh))
# endif
# define SSL_CTX_add_extra_chain_cert(ctx,x509) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_EXTRA_CHAIN_CERT,0,(char *)(x509))
# define SSL_CTX_get_extra_chain_certs(ctx,px509) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_GET_EXTRA_CHAIN_CERTS,0,px509)
# define SSL_CTX_get_extra_chain_certs_only(ctx,px509) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_GET_EXTRA_CHAIN_CERTS,1,px509)
# define SSL_CTX_clear_extra_chain_certs(ctx) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_CLEAR_EXTRA_CHAIN_CERTS,0,NULL)
#
 define SSL_CTX_set0_chain(ctx,sk) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_CHAIN,0,(char *)(sk))
# define SSL_CTX_set1_chain(ctx,sk) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_CHAIN,1,(char *)(sk))
# define SSL_CTX_add0_chain_cert(ctx,x509) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_CHAIN_CERT,0,(char *)(x509))
# define SSL_CTX_add1_chain_cert(ctx,x509) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_CHAIN_CERT,1,(char *)(x509))
# define SSL_CTX_get0_chain_certs(ctx,px509) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_GET_CHAIN_CERTS,0,px509)
# define SSL_CTX_clear_chain_certs(ctx) \
        SSL_CTX_set0_chain(ctx,NULL)
# define SSL_CTX_build_cert_chain(ctx, flags) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_BUILD_CERT_CHAIN, flags, NULL)
# define SSL_CTX_select_current_cert(ctx,x509) \
        SSL_CTX_ctrl(ctx,SSL_CTRL_SELECT_CURRENT_CERT,0,(char *)(x509))
```

```
# define SSL_CTX_set_current_cert(ctx, op) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_CURRENT_CERT, op, NULL)
# define SSL_CTX_set0_verify_cert_store(ctx,st) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_VERIFY_CERT_STORE,0,(char
 *)(st))
# define SSL_CTX_set1_verify_cert_store(ctx,st) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_VERIFY_CERT_STORE,1,(char *)(st))
# define SSL_CTX_get0_verify_cert_store(ctx,st) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_GET_VERIFY_CERT_STORE,0,(char *)(st))
# define SSL_CTX_set0_chain_cert_store(ctx,st) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_CHAIN_CERT_STORE,0,(char *)(st))
# define SSL_CTX_set1_chain_cert_store(ctx,st) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_CHAIN_CERT_STORE,1,(char *)(st))
# define SSL_CTX_get0_chain_cert_store(ctx,st) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_GET_CHAIN_CERT_STORE,0,(char *)(st))
# define SSL_set0_chain(s,sk) \
     SSL_ctrl(s,SSL_CTRL_CHAIN,0,(char *)(sk))
# define SSL_set1_chain(s,sk) \
     SSL_ctrl(s,SSL_CTRL_CHAIN,1,(char *)(sk))
# define SSL_add0_chain_cert(s,x509) \
     SSL_ctrl(s,SSL_CTRL_CHAIN_CERT,0,(char *)(x509))
# define SSL_add1_chain_cert(s,x509) \
     SSL_ctrl(s,SSL_CTRL_CHAIN_CERT,1,(char
 *)(x509))
# define SSL_get0_chain_certs(s,px509) \
     SSL_ctrl(s,SSL_CTRL_GET_CHAIN_CERTS,0,px509)
# define SSL_clear_chain_certs(s) \
     SSL_set0_chain(s,NULL)
# define SSL_build_cert_chain(s, flags) \
     SSL_ctrl(s,SSL_CTRL_BUILD_CERT_CHAIN, flags, NULL)
# define SSL_select_current_cert(s,x509) \
     SSL_ctrl(s,SSL_CTRL_SELECT_CURRENT_CERT,0,(char *)(x509))
# define SSL_set_current_cert(s,op) \
     SSL_ctrl(s,SSL_CTRL_SET_CURRENT_CERT, op, NULL)
# define SSL_set0_verify_cert_store(s,st) \
     SSL_ctrl(s,SSL_CTRL_SET_VERIFY_CERT_STORE,0,(char *)(st))
# define SSL_set1_verify_cert_store(s,st) \
     SSL_ctrl(s,SSL_CTRL_SET_VERIFY_CERT_STORE,1,(char *)(st))
#define SSL_get0_verify_cert_store(s,st) \
     SSL_ctrl(s,SSL_CTRL_GET_VERIFY_CERT_STORE,0,(char *)(st))
# define SSL_set0_chain_cert_store(s,st) \
     SSL_ctrl(s,SSL_CTRL_SET_CHAIN_CERT_STORE,0,(char *)(st))
# define SSL_set1_chain_cert_store(s,st) \
     SSL_ctrl(s,SSL_CTRL_SET_CHAIN_CERT_STORE,1,(char
 *)(st))
#define SSL_get0_chain_cert_store(s,st) \
     SSL_ctrl(s,SSL_CTRL_GET_CHAIN_CERT_STORE,0,(char *)(st))
```

```
# define SSL_get1_groups(s, glist) \
     SSL_ctrl(s,SSL_CTRL_GET_GROUPS,0,(int*)(glist))
# define SSL_CTX_set1_groups(ctx, glist, glistlen) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_GROUPS,glistlen,(int *)(glist))
# define SSL_CTX_set1_groups_list(ctx, s) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_GROUPS_LIST,0,(char *)(s))
# define SSL_set1_groups(s, glist, glistlen) \
     SSL_ctrl(s,SSL_CTRL_SET_GROUPS,glistlen,(char *)(glist))
# define SSL_set1_groups_list(s, str) \
     SSL_ctrl(s,SSL_CTRL_SET_GROUPS_LIST,0,(char *)(str))
# define SSL_get_shared_group(s, n) \
     SSL_ctrl(s,SSL_CTRL_GET_SHARED_GROUP,n,NULL)
# define SSL_get_negotiated_group(s) \
     SSL_ctrl(s,SSL_CTRL_GET_NEGOTIATED_GROUP,0,NULL)
# define SSL_CTX_set1_sigalgs(ctx, slist, slistlen) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_SIGALGS,slistlen,(int *)(slist))
# define SSL_CTX_set1_sigalgs_list(ctx,
 s) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_SIGALGS_LIST,0,(char *)(s))
# define SSL_set1_sigalgs(s, slist, slistlen) \
     SSL_ctrl(s,SSL_CTRL_SET_SIGALGS,slistlen,(int *)(slist))
# define SSL_set1_sigalgs_list(s, str) \
     SSL_ctrl(s,SSL_CTRL_SET_SIGALGS_LIST,0,(char *)(str))
# define SSL_CTX_set1_client_sigalgs(ctx, slist, slistlen) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_CLIENT_SIGALGS,slistlen,(int *)(slist))
# define SSL_CTX_set1_client_sigalgs_list(ctx, s) \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_CLIENT_SIGALGS_LIST,0,(char *)(s))
# define SSL_set1_client_sigalgs(s, slist, slistlen) \
     SSL_ctrl(s,SSL_CTRL_SET_CLIENT_SIGALGS,slistlen,(int *)(slist))
# define SSL_set1_client_sigalgs_list(s, str) \
     SSL_ctrl(s,SSL_CTRL_SET_CLIENT_SIGALGS_LIST,0,(char *)(str))
# define SSL_get0_certificate_types(s, clist) \
     SSL_ctrl(s, SSL_CTRL_GET_CLIENT_CERT_TYPES, 0, (char *)(clist))
# define SSL_CTX_set1_client_certificate_types(ctx, clist, clistlen)
 \
     SSL_CTX_ctrl(ctx,SSL_CTRL_SET_CLIENT_CERT_TYPES,clistlen, \
             (char *)(clist))
# define SSL_set1_client_certificate_types(s, clist, clistlen) \
     SSL_ctrl(s,SSL_CTRL_SET_CLIENT_CERT_TYPES,clistlen,(char *)(clist))
# define SSL_get_signature_nid(s, pn) \
     SSL_ctrl(s,SSL_CTRL_GET_SIGNATURE_NID,0,pn)
# define SSL_get_peer_signature_nid(s, pn) \
     SSL_ctrl(s,SSL_CTRL_GET_PEER_SIGNATURE_NID,0,pn)
# define SSL_get_peer_tmp_key(s, pk) \
     SSL_ctrl(s,SSL_CTRL_GET_PEER_TMP_KEY,0,pk)
# define SSL_get_tmp_key(s, pk) \
     SSL_ctrl(s,SSL_CTRL_GET_TMP_KEY,0,pk)
# define SSL_get0_raw_cipherlist(s, plst) \
```

```
     SSL_ctrl(s,SSL_CTRL_GET_RAW_CIPHERLIST,0,plst)
# define SSL_get0_ec_point_formats(s, plst) \
     SSL_ctrl(s,SSL_CTRL_GET_EC_POINT_FORMATS,0,plst)
# define SSL_CTX_set_min_proto_version(ctx, version) \
     SSL_CTX_ctrl(ctx, SSL_CTRL_SET_MIN_PROTO_VERSION, version, NULL)
# define SSL_CTX_set_max_proto_version(ctx, version)
 \
     SSL_CTX_ctrl(ctx, SSL_CTRL_SET_MAX_PROTO_VERSION, version, NULL)
# define SSL_CTX_get_min_proto_version(ctx) \
     SSL_CTX_ctrl(ctx, SSL_CTRL_GET_MIN_PROTO_VERSION, 0, NULL)
# define SSL_CTX_get_max_proto_version(ctx) \
     SSL_CTX_ctrl(ctx, SSL_CTRL_GET_MAX_PROTO_VERSION, 0, NULL)
# define SSL_set_min_proto_version(s, version) \
     SSL_ctrl(s, SSL_CTRL_SET_MIN_PROTO_VERSION, version, NULL)
# define SSL_set_max_proto_version(s, version) \
     SSL_ctrl(s, SSL_CTRL_SET_MAX_PROTO_VERSION, version, NULL)
# define SSL_get_min_proto_version(s) \
     SSL_ctrl(s, SSL_CTRL_GET_MIN_PROTO_VERSION, 0, NULL)
# define SSL_get_max_proto_version(s) \
     SSL_ctrl(s, SSL_CTRL_GET_MAX_PROTO_VERSION, 0, NULL)

const char *SSL_group_to_name(SSL *s, int id);

/* Backwards compatibility, original 1.1.0 names */
# define SSL_CTRL_GET_SERVER_TMP_KEY \
      SSL_CTRL_GET_PEER_TMP_KEY
# define SSL_get_server_tmp_key(s, pk) \
      SSL_get_peer_tmp_key(s, pk)

int SSL_set0_tmp_dh_pkey(SSL
 *s, EVP_PKEY *dhpkey);
int SSL_CTX_set0_tmp_dh_pkey(SSL_CTX *ctx, EVP_PKEY *dhpkey);

/*
* The following symbol names are old and obsolete. They are kept
* for compatibility reasons only and should not be used anymore.
*/
# define SSL_CTRL_GET_CURVES          SSL_CTRL_GET_GROUPS
# define SSL_CTRL_SET_CURVES          SSL_CTRL_SET_GROUPS
# define SSL_CTRL_SET_CURVES_LIST     SSL_CTRL_SET_GROUPS_LIST
# define SSL_CTRL_GET_SHARED_CURVE    SSL_CTRL_GET_SHARED_GROUP

# define SSL_get1_curves              SSL_get1_groups
# define SSL_CTX_set1_curves          SSL_CTX_set1_groups
# define SSL_CTX_set1_curves_list     SSL_CTX_set1_groups_list
# define SSL_set1_curves              SSL_set1_groups
# define SSL_set1_curves_list         SSL_set1_groups_list
# define SSL_get_shared_curve         SSL_get_shared_group
```

```
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
/* Provide some compatibility macros for removed functionality. */
#  define SSL_CTX_need_tmp_RSA(ctx)
      0
#  define SSL_CTX_set_tmp_rsa(ctx,rsa)            1
#  define SSL_need_tmp_RSA(ssl)                   0
#  define SSL_set_tmp_rsa(ssl,rsa)                1
#  define SSL_CTX_set_ecdh_auto(dummy, onoff)     ((onoff) != 0)
#  define SSL_set_ecdh_auto(dummy, onoff)         ((onoff) != 0)
/*
* We "pretend" to call the callback to avoid warnings about unused static
* functions.
*/
#  define SSL_CTX_set_tmp_rsa_callback(ctx, cb)   while(0) (cb)(NULL, 0, 0)
#  define SSL_set_tmp_rsa_callback(ssl, cb)       while(0) (cb)(NULL, 0, 0)
# endif
__owur const BIO_METHOD *BIO_f_ssl(void);
__owur BIO *BIO_new_ssl(SSL_CTX *ctx, int client);
__owur BIO *BIO_new_ssl_connect(SSL_CTX *ctx);
__owur BIO *BIO_new_buffer_ssl_connect(SSL_CTX *ctx);
__owur int BIO_ssl_copy_session_id(BIO *to, BIO *from);
void BIO_ssl_shutdown(BIO *ssl_bio);

__owur int SSL_CTX_set_cipher_list(SSL_CTX *, const char *str);
__owur SSL_CTX *SSL_CTX_new(const SSL_METHOD *meth);
__owur SSL_CTX *SSL_CTX_new_ex(OSSL_LIB_CTX
 *libctx, const char *propq,
                               const SSL_METHOD *meth);
int SSL_CTX_up_ref(SSL_CTX *ctx);
void SSL_CTX_free(SSL_CTX *);
__owur long SSL_CTX_set_timeout(SSL_CTX *ctx, long t);
__owur long SSL_CTX_get_timeout(const SSL_CTX *ctx);
__owur X509_STORE *SSL_CTX_get_cert_store(const SSL_CTX *);
void SSL_CTX_set_cert_store(SSL_CTX *, X509_STORE *);
void SSL_CTX_set1_cert_store(SSL_CTX *, X509_STORE *);
__owur int SSL_want(const SSL *s);
__owur int SSL_clear(SSL *s);

void SSL_CTX_flush_sessions(SSL_CTX *ctx, long tm);

__owur const SSL_CIPHER *SSL_get_current_cipher(const SSL *s);
__owur const SSL_CIPHER *SSL_get_pending_cipher(const SSL *s);
__owur int SSL_CIPHER_get_bits(const SSL_CIPHER *c, int *alg_bits);
__owur const char *SSL_CIPHER_get_version(const SSL_CIPHER *c);
__owur const char *SSL_CIPHER_get_name(const SSL_CIPHER *c);
__owur const char *SSL_CIPHER_standard_name(const SSL_CIPHER *c);
```

```
__owur const char *OPENSSL_cipher_name(const char *rfc_name);
__owur
 uint32_t SSL_CIPHER_get_id(const SSL_CIPHER *c);
__owur uint16_t SSL_CIPHER_get_protocol_id(const SSL_CIPHER *c);
__owur int SSL_CIPHER_get_kx_nid(const SSL_CIPHER *c);
__owur int SSL_CIPHER_get_auth_nid(const SSL_CIPHER *c);
__owur const EVP_MD *SSL_CIPHER_get_handshake_digest(const SSL_CIPHER *c);
__owur int SSL_CIPHER_is_aead(const SSL_CIPHER *c);

__owur int SSL_get_fd(const SSL *s);
__owur int SSL_get_rfd(const SSL *s);
__owur int SSL_get_wfd(const SSL *s);
__owur const char *SSL_get_cipher_list(const SSL *s, int n);
__owur char *SSL_get_shared_ciphers(const SSL *s, char *buf, int size);
__owur int SSL_get_read_ahead(const SSL *s);
__owur int SSL_pending(const SSL *s);
__owur int SSL_has_pending(const SSL *s);
# ifndef OPENSSL_NO_SOCK
__owur int SSL_set_fd(SSL *s, int fd);
__owur int SSL_set_rfd(SSL *s, int fd);
__owur int SSL_set_wfd(SSL *s, int fd);
# endif
void SSL_set0_rbio(SSL *s, BIO *rbio);
void SSL_set0_wbio(SSL *s, BIO *wbio);
void SSL_set_bio(SSL *s, BIO *rbio, BIO *wbio);
__owur
 BIO *SSL_get_rbio(const SSL *s);
__owur BIO *SSL_get_wbio(const SSL *s);
__owur int SSL_set_cipher_list(SSL *s, const char *str);
__owur int SSL_CTX_set_ciphersuites(SSL_CTX *ctx, const char *str);
__owur int SSL_set_ciphersuites(SSL *s, const char *str);
void SSL_set_read_ahead(SSL *s, int yes);
__owur int SSL_get_verify_mode(const SSL *s);
__owur int SSL_get_verify_depth(const SSL *s);
__owur SSL_verify_cb SSL_get_verify_callback(const SSL *s);
void SSL_set_verify(SSL *s, int mode, SSL_verify_cb callback);
void SSL_set_verify_depth(SSL *s, int depth);
void SSL_set_cert_cb(SSL *s, int (*cb) (SSL *ssl, void *arg), void *arg);
# ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 __owur int SSL_use_RSAPrivateKey(SSL *ssl, RSA *rsa);
OSSL_DEPRECATEDIN_3_0
__owur int SSL_use_RSAPrivateKey_ASN1(SSL *ssl,
                                      const unsigned char *d, long len);
# endif
__owur int SSL_use_PrivateKey(SSL *ssl, EVP_PKEY *pkey);
__owur int SSL_use_PrivateKey_ASN1(int
 pk, SSL *ssl, const unsigned char *d,
                                   long len);
```

```
__owur int SSL_use_certificate(SSL *ssl, X509 *x);
__owur int SSL_use_certificate_ASN1(SSL *ssl, const unsigned char *d, int len);
__owur int SSL_use_cert_and_key(SSL *ssl, X509 *x509, EVP_PKEY *privatekey,
                                STACK_OF(X509) *chain, int override);


/* serverinfo file format versions */
# define SSL_SERVERINFOV1   1
# define SSL_SERVERINFOV2   2

/* Set serverinfo data for the current active cert. */
__owur int SSL_CTX_use_serverinfo(SSL_CTX *ctx, const unsigned char *serverinfo,
                                  size_t serverinfo_length);
__owur int SSL_CTX_use_serverinfo_ex(SSL_CTX *ctx, unsigned int version,
                                     const unsigned char *serverinfo,
                                     size_t serverinfo_length);
__owur int SSL_CTX_use_serverinfo_file(SSL_CTX *ctx, const char *file);

#ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0
__owur
 int SSL_use_RSAPrivateKey_file(SSL *ssl, const char *file, int type);
#endif

__owur int SSL_use_PrivateKey_file(SSL *ssl, const char *file, int type);
__owur int SSL_use_certificate_file(SSL *ssl, const char *file, int type);

#ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0
__owur int SSL_CTX_use_RSAPrivateKey_file(SSL_CTX *ctx, const char *file,
                                          int type);
#endif
__owur int SSL_CTX_use_PrivateKey_file(SSL_CTX *ctx, const char *file,
                                       int type);
__owur int SSL_CTX_use_certificate_file(SSL_CTX *ctx, const char *file,
                                        int type);
/* PEM type */
__owur int SSL_CTX_use_certificate_chain_file(SSL_CTX *ctx, const char *file);
__owur int SSL_use_certificate_chain_file(SSL *ssl, const char *file);
__owur STACK_OF(X509_NAME) *SSL_load_client_CA_file(const char *file);
__owur STACK_OF(X509_NAME)
*SSL_load_client_CA_file_ex(const char *file, OSSL_LIB_CTX *libctx,
                            const char *propq);
__owur int SSL_add_file_cert_subjects_to_stack(STACK_OF(X509_NAME) *stackCAs,
                                               const char *file);
int SSL_add_dir_cert_subjects_to_stack(STACK_OF(X509_NAME) *stackCAs,
                                       const char *dir);
int SSL_add_store_cert_subjects_to_stack(STACK_OF(X509_NAME) *stackCAs,
```

```
                                const char *uri);

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define SSL_load_error_strings() \
   OPENSSL_init_ssl(OPENSSL_INIT_LOAD_SSL_STRINGS \
                    | OPENSSL_INIT_LOAD_CRYPTO_STRINGS, NULL)
# endif

__owur const char *SSL_state_string(const SSL *s);
__owur const char *SSL_rstate_string(const SSL *s);
__owur const char *SSL_state_string_long(const SSL *s);
__owur const char *SSL_rstate_string_long(const SSL *s);
__owur long SSL_SESSION_get_time(const SSL_SESSION *s);
__owur long SSL_SESSION_set_time(SSL_SESSION *s, long t);
__owur long SSL_SESSION_get_timeout(const
 SSL_SESSION *s);
__owur long SSL_SESSION_set_timeout(SSL_SESSION *s, long t);
__owur int SSL_SESSION_get_protocol_version(const SSL_SESSION *s);
__owur int SSL_SESSION_set_protocol_version(SSL_SESSION *s, int version);

__owur const char *SSL_SESSION_get0_hostname(const SSL_SESSION *s);
__owur int SSL_SESSION_set1_hostname(SSL_SESSION *s, const char *hostname);
void SSL_SESSION_get0_alpn_selected(const SSL_SESSION *s,
                                    const unsigned char **alpn,
                                    size_t *len);
__owur int SSL_SESSION_set1_alpn_selected(SSL_SESSION *s,
                                          const unsigned char *alpn,
                                          size_t len);
__owur const SSL_CIPHER *SSL_SESSION_get0_cipher(const SSL_SESSION *s);
__owur int SSL_SESSION_set_cipher(SSL_SESSION *s, const SSL_CIPHER *cipher);
__owur int SSL_SESSION_has_ticket(const SSL_SESSION *s);
__owur unsigned long SSL_SESSION_get_ticket_lifetime_hint(const
 SSL_SESSION *s);
void SSL_SESSION_get0_ticket(const SSL_SESSION *s, const unsigned char **tick,
                             size_t *len);
__owur uint32_t SSL_SESSION_get_max_early_data(const SSL_SESSION *s);
__owur int SSL_SESSION_set_max_early_data(SSL_SESSION *s,
                                          uint32_t max_early_data);
__owur int SSL_copy_session_id(SSL *to, const SSL *from);
__owur X509 *SSL_SESSION_get0_peer(SSL_SESSION *s);
__owur int SSL_SESSION_set1_id_context(SSL_SESSION *s,
                                       const unsigned char *sid_ctx,
                                       unsigned int sid_ctx_len);
__owur int SSL_SESSION_set1_id(SSL_SESSION *s, const unsigned char *sid,
                               unsigned int sid_len);
__owur int SSL_SESSION_is_resumable(const SSL_SESSION *s);

__owur SSL_SESSION *SSL_SESSION_new(void);
```

```
__owur SSL_SESSION *SSL_SESSION_dup(const SSL_SESSION *src);
const unsigned char *SSL_SESSION_get_id(const SSL_SESSION *s,

                                        unsigned int *len);
const unsigned char *SSL_SESSION_get0_id_context(const SSL_SESSION *s,
                                                 unsigned int *len);
__owur unsigned int SSL_SESSION_get_compress_id(const SSL_SESSION *s);
# ifndef OPENSSL_NO_STDIO
int SSL_SESSION_print_fp(FILE *fp, const SSL_SESSION *ses);
# endif
int SSL_SESSION_print(BIO *fp, const SSL_SESSION *ses);
int SSL_SESSION_print_keylog(BIO *bp, const SSL_SESSION *x);
int SSL_SESSION_up_ref(SSL_SESSION *ses);
void SSL_SESSION_free(SSL_SESSION *ses);
__owur int i2d_SSL_SESSION(const SSL_SESSION *in, unsigned char **pp);
__owur int SSL_set_session(SSL *to, SSL_SESSION *session);
int SSL_CTX_add_session(SSL_CTX *ctx, SSL_SESSION *session);
int SSL_CTX_remove_session(SSL_CTX *ctx, SSL_SESSION *session);
__owur int SSL_CTX_set_generate_session_id(SSL_CTX *ctx, GEN_SESSION_CB cb);
__owur int SSL_set_generate_session_id(SSL *s, GEN_SESSION_CB cb);
__owur int SSL_has_matching_session_id(const
 SSL *s,
                                       const unsigned char *id,
                                       unsigned int id_len);
SSL_SESSION *d2i_SSL_SESSION(SSL_SESSION **a, const unsigned char **pp,
                             long length);

# ifdef OPENSSL_X509_H
__owur X509 *SSL_get0_peer_certificate(const SSL *s);
__owur X509 *SSL_get1_peer_certificate(const SSL *s);
/* Deprecated in 3.0.0 */
#  ifndef OPENSSL_NO_DEPRECATED_3_0
#   define SSL_get_peer_certificate SSL_get1_peer_certificate
#  endif
# endif

__owur STACK_OF(X509) *SSL_get_peer_cert_chain(const SSL *s);

__owur int SSL_CTX_get_verify_mode(const SSL_CTX *ctx);
__owur int SSL_CTX_get_verify_depth(const SSL_CTX *ctx);
__owur SSL_verify_cb SSL_CTX_get_verify_callback(const SSL_CTX *ctx);
void SSL_CTX_set_verify(SSL_CTX *ctx, int mode, SSL_verify_cb callback);
void SSL_CTX_set_verify_depth(SSL_CTX *ctx, int depth);
void SSL_CTX_set_cert_verify_callback(SSL_CTX *ctx,
                                      int (*cb)
 (X509_STORE_CTX *, void *),
                                      void *arg);
void SSL_CTX_set_cert_cb(SSL_CTX *c, int (*cb) (SSL *ssl, void *arg),
```

```
                    void *arg);
# ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0
__owur int SSL_CTX_use_RSAPrivateKey(SSL_CTX *ctx, RSA *rsa);
OSSL_DEPRECATEDIN_3_0
__owur int SSL_CTX_use_RSAPrivateKey_ASN1(SSL_CTX *ctx, const unsigned char *d,
                                          long len);
# endif
__owur int SSL_CTX_use_PrivateKey(SSL_CTX *ctx, EVP_PKEY *pkey);
__owur int SSL_CTX_use_PrivateKey_ASN1(int pk, SSL_CTX *ctx,
                                       const unsigned char *d, long len);
__owur int SSL_CTX_use_certificate(SSL_CTX *ctx, X509 *x);
__owur int SSL_CTX_use_certificate_ASN1(SSL_CTX *ctx, int len,
                                        const unsigned char *d);
__owur int SSL_CTX_use_cert_and_key(SSL_CTX *ctx, X509 *x509, EVP_PKEY *privatekey,
                                    STACK_OF(X509) *chain,
 int override);

void SSL_CTX_set_default_passwd_cb(SSL_CTX *ctx, pem_password_cb *cb);
void SSL_CTX_set_default_passwd_cb_userdata(SSL_CTX *ctx, void *u);
pem_password_cb *SSL_CTX_get_default_passwd_cb(SSL_CTX *ctx);
void *SSL_CTX_get_default_passwd_cb_userdata(SSL_CTX *ctx);
void SSL_set_default_passwd_cb(SSL *s, pem_password_cb *cb);
void SSL_set_default_passwd_cb_userdata(SSL *s, void *u);
pem_password_cb *SSL_get_default_passwd_cb(SSL *s);
void *SSL_get_default_passwd_cb_userdata(SSL *s);

__owur int SSL_CTX_check_private_key(const SSL_CTX *ctx);
__owur int SSL_check_private_key(const SSL *ctx);

__owur int SSL_CTX_set_session_id_context(SSL_CTX *ctx,
                                          const unsigned char *sid_ctx,
                                          unsigned int sid_ctx_len);

SSL *SSL_new(SSL_CTX *ctx);
int SSL_up_ref(SSL *s);
int SSL_is_dtls(const SSL *s);
__owur int SSL_set_session_id_context(SSL *ssl, const unsigned char *sid_ctx,

     unsigned int sid_ctx_len);

__owur int SSL_CTX_set_purpose(SSL_CTX *ctx, int purpose);
__owur int SSL_set_purpose(SSL *ssl, int purpose);
__owur int SSL_CTX_set_trust(SSL_CTX *ctx, int trust);
__owur int SSL_set_trust(SSL *ssl, int trust);

__owur int SSL_set1_host(SSL *s, const char *hostname);
__owur int SSL_add1_host(SSL *s, const char *hostname);
```

```
__owur const char *SSL_get0_peername(SSL *s);
void SSL_set_hostflags(SSL *s, unsigned int flags);

__owur int SSL_CTX_dane_enable(SSL_CTX *ctx);
__owur int SSL_CTX_dane_mtype_set(SSL_CTX *ctx, const EVP_MD *md,
                                  uint8_t mtype, uint8_t ord);
__owur int SSL_dane_enable(SSL *s, const char *basedomain);
__owur int SSL_dane_tlsa_add(SSL *s, uint8_t usage, uint8_t selector,
                             uint8_t mtype, const unsigned char *data, size_t dlen);
__owur int SSL_get0_dane_authority(SSL *s, X509 **mcert, EVP_PKEY **mspki);
__owur int SSL_get0_dane_tlsa(SSL *s, uint8_t *usage, uint8_t *selector,

                              uint8_t *mtype, const unsigned char **data,
                               size_t *dlen);
/*
* Bridge opacity barrier between libcrypt and libssl, also needed to support
* offline testing in test/danetest.c
*/
SSL_DANE *SSL_get0_dane(SSL *ssl);
/*
* DANE flags
*/
unsigned long SSL_CTX_dane_set_flags(SSL_CTX *ctx, unsigned long flags);
unsigned long SSL_CTX_dane_clear_flags(SSL_CTX *ctx, unsigned long flags);
unsigned long SSL_dane_set_flags(SSL *ssl, unsigned long flags);
unsigned long SSL_dane_clear_flags(SSL *ssl, unsigned long flags);

__owur int SSL_CTX_set1_param(SSL_CTX *ctx, X509_VERIFY_PARAM *vpm);
__owur int SSL_set1_param(SSL *ssl, X509_VERIFY_PARAM *vpm);

__owur X509_VERIFY_PARAM *SSL_CTX_get0_param(SSL_CTX *ctx);
__owur X509_VERIFY_PARAM *SSL_get0_param(SSL *ssl);

# ifndef OPENSSL_NO_SRP
#  ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 int SSL_CTX_set_srp_username(SSL_CTX *ctx, char *name);
OSSL_DEPRECATEDIN_3_0 int SSL_CTX_set_srp_password(SSL_CTX
 *ctx, char *password);
OSSL_DEPRECATEDIN_3_0 int SSL_CTX_set_srp_strength(SSL_CTX *ctx, int strength);
OSSL_DEPRECATEDIN_3_0
int SSL_CTX_set_srp_client_pwd_callback(SSL_CTX *ctx,
                                        char *(*cb) (SSL *, void *));
OSSL_DEPRECATEDIN_3_0
int SSL_CTX_set_srp_verify_param_callback(SSL_CTX *ctx,
                                          int (*cb) (SSL *, void *));
OSSL_DEPRECATEDIN_3_0
int SSL_CTX_set_srp_username_callback(SSL_CTX *ctx,
                                      int (*cb) (SSL *, int *, void *));
```

```
OSSL_DEPRECATEDIN_3_0 int SSL_CTX_set_srp_cb_arg(SSL_CTX *ctx, void *arg);

OSSL_DEPRECATEDIN_3_0
int SSL_set_srp_server_param(SSL *s, const BIGNUM *N, const BIGNUM *g,
                             BIGNUM *sa, BIGNUM *v, char *info);
OSSL_DEPRECATEDIN_3_0
int SSL_set_srp_server_param_pw(SSL *s, const char *user, const char *pass,
                                const char *grp);

OSSL_DEPRECATEDIN_3_0 __owur BIGNUM *SSL_get_srp_g(SSL *s);
OSSL_DEPRECATEDIN_3_0
 __owur BIGNUM *SSL_get_srp_N(SSL *s);

OSSL_DEPRECATEDIN_3_0 __owur char *SSL_get_srp_username(SSL *s);
OSSL_DEPRECATEDIN_3_0 __owur char *SSL_get_srp_userinfo(SSL *s);
#  endif
# endif

/*
* ClientHello callback and helpers.
*/

# define SSL_CLIENT_HELLO_SUCCESS 1
# define SSL_CLIENT_HELLO_ERROR   0
# define SSL_CLIENT_HELLO_RETRY   (-1)

typedef int (*SSL_client_hello_cb_fn) (SSL *s, int *al, void *arg);
void SSL_CTX_set_client_hello_cb(SSL_CTX *c, SSL_client_hello_cb_fn cb,
                                 void *arg);
int SSL_client_hello_isv2(SSL *s);
unsigned int SSL_client_hello_get0_legacy_version(SSL *s);
size_t SSL_client_hello_get0_random(SSL *s, const unsigned char **out);
size_t SSL_client_hello_get0_session_id(SSL *s, const unsigned char **out);
size_t SSL_client_hello_get0_ciphers(SSL *s, const unsigned char **out);
size_t SSL_client_hello_get0_compression_methods(SSL *s,
                                                 const unsigned char **out);
int
 SSL_client_hello_get1_extensions_present(SSL *s, int **out, size_t *outlen);
int SSL_client_hello_get0_ext(SSL *s, unsigned int type,
                              const unsigned char **out, size_t *outlen);

void SSL_certs_clear(SSL *s);
void SSL_free(SSL *ssl);
# ifdef OSSL_ASYNC_FD
/*
* Windows application developer has to include windows.h to use these.
*/
__owur int SSL_waiting_for_async(SSL *s);
```

```
__owur int SSL_get_all_async_fds(SSL *s, OSSL_ASYNC_FD *fds, size_t *numfds);
__owur int SSL_get_changed_async_fds(SSL *s, OSSL_ASYNC_FD *addfd,
                                     size_t *numaddfds, OSSL_ASYNC_FD *delfd,
                                     size_t *numdelfds);
__owur int SSL_CTX_set_async_callback(SSL_CTX *ctx, SSL_async_callback_fn callback);
__owur int SSL_CTX_set_async_callback_arg(SSL_CTX *ctx, void *arg);
__owur int SSL_set_async_callback(SSL *s, SSL_async_callback_fn callback);
__owur int SSL_set_async_callback_arg(SSL *s, void *arg);
__owur int SSL_get_async_status(SSL
 *s, int *status);

# endif
__owur int SSL_accept(SSL *ssl);
__owur int SSL_stateless(SSL *s);
__owur int SSL_connect(SSL *ssl);
__owur int SSL_read(SSL *ssl, void *buf, int num);
__owur int SSL_read_ex(SSL *ssl, void *buf, size_t num, size_t *readbytes);

# define SSL_READ_EARLY_DATA_ERROR   0
# define SSL_READ_EARLY_DATA_SUCCESS 1
# define SSL_READ_EARLY_DATA_FINISH  2

__owur int SSL_read_early_data(SSL *s, void *buf, size_t num,
                               size_t *readbytes);
__owur int SSL_peek(SSL *ssl, void *buf, int num);
__owur int SSL_peek_ex(SSL *ssl, void *buf, size_t num, size_t *readbytes);
__owur ossl_ssize_t SSL_sendfile(SSL *s, int fd, off_t offset, size_t size,
                                 int flags);
__owur int SSL_write(SSL *ssl, const void *buf, int num);
__owur int SSL_write_ex(SSL *s, const void *buf, size_t num, size_t *written);
__owur int SSL_write_early_data(SSL *s, const void *buf, size_t num,
                                size_t *written);
long
 SSL_ctrl(SSL *ssl, int cmd, long larg, void *parg);
long SSL_callback_ctrl(SSL *, int, void (*)(void));
long SSL_CTX_ctrl(SSL_CTX *ctx, int cmd, long larg, void *parg);
long SSL_CTX_callback_ctrl(SSL_CTX *, int, void (*)(void));

# define SSL_EARLY_DATA_NOT_SENT    0
# define SSL_EARLY_DATA_REJECTED    1
# define SSL_EARLY_DATA_ACCEPTED    2

__owur int SSL_get_early_data_status(const SSL *s);

__owur int SSL_get_error(const SSL *s, int ret_code);
__owur const char *SSL_get_version(const SSL *s);

/* This sets the 'default' SSL version that SSL_new() will create */
```

```
# ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0
__owur int SSL_CTX_set_ssl_version(SSL_CTX *ctx, const SSL_METHOD *meth);
# endif

# ifndef OPENSSL_NO_SSL3_METHOD
#  ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *SSLv3_method(void); /* SSLv3 */
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *SSLv3_server_method(void);
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *SSLv3_client_method(void);
#
 endif
# endif

#define SSLv23_method          TLS_method
#define SSLv23_server_method    TLS_server_method
#define SSLv23_client_method    TLS_client_method

/* Negotiate highest available SSL/TLS version */
__owur const SSL_METHOD *TLS_method(void);
__owur const SSL_METHOD *TLS_server_method(void);
__owur const SSL_METHOD *TLS_client_method(void);

# ifndef OPENSSL_NO_TLS1_METHOD
#  ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_method(void); /* TLSv1.0 */
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_server_method(void);
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_client_method(void);
#  endif
# endif

# ifndef OPENSSL_NO_TLS1_1_METHOD
#  ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_1_method(void); /* TLSv1.1 */
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_1_server_method(void);
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_1_client_method(void);
#
 endif
# endif

# ifndef OPENSSL_NO_TLS1_2_METHOD
#  ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_2_method(void); /* TLSv1.2 */
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_2_server_method(void);
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *TLSv1_2_client_method(void);
#  endif
# endif
```

```
# ifndef OPENSSL_NO_DTLS1_METHOD
#  ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *DTLSv1_method(void); /* DTLSv1.0 */
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *DTLSv1_server_method(void);
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *DTLSv1_client_method(void);
#  endif
# endif

# ifndef OPENSSL_NO_DTLS1_2_METHOD
/* DTLSv1.2 */
#  ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *DTLSv1_2_method(void);
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *DTLSv1_2_server_method(void);
OSSL_DEPRECATEDIN_1_1_0 __owur const SSL_METHOD *DTLSv1_2_client_method(void);
#
 endif
# endif

__owur const SSL_METHOD *DTLS_method(void); /* DTLS 1.0 and 1.2 */
__owur const SSL_METHOD *DTLS_server_method(void); /* DTLS 1.0 and 1.2 */
__owur const SSL_METHOD *DTLS_client_method(void); /* DTLS 1.0 and 1.2 */

__owur size_t DTLS_get_data_mtu(const SSL *s);

__owur STACK_OF(SSL_CIPHER) *SSL_get_ciphers(const SSL *s);
__owur STACK_OF(SSL_CIPHER) *SSL_CTX_get_ciphers(const SSL_CTX *ctx);
__owur STACK_OF(SSL_CIPHER) *SSL_get_client_ciphers(const SSL *s);
__owur STACK_OF(SSL_CIPHER) *SSL_get1_supported_ciphers(SSL *s);

__owur int SSL_do_handshake(SSL *s);
int SSL_key_update(SSL *s, int updatetype);
int SSL_get_key_update_type(const SSL *s);
int SSL_renegotiate(SSL *s);
int SSL_renegotiate_abbreviated(SSL *s);
__owur int SSL_renegotiate_pending(const SSL *s);
int SSL_new_session_ticket(SSL *s);
int SSL_shutdown(SSL *s);
__owur int SSL_verify_client_post_handshake(SSL *s);
void SSL_CTX_set_post_handshake_auth(SSL_CTX *ctx, int val);
void SSL_set_post_handshake_auth(SSL
 *s, int val);

__owur const SSL_METHOD *SSL_CTX_get_ssl_method(const SSL_CTX *ctx);
__owur const SSL_METHOD *SSL_get_ssl_method(const SSL *s);
__owur int SSL_set_ssl_method(SSL *s, const SSL_METHOD *method);
__owur const char *SSL_alert_type_string_long(int value);
__owur const char *SSL_alert_type_string(int value);
__owur const char *SSL_alert_desc_string_long(int value);
```

```
__owur const char *SSL_alert_desc_string(int value);

void SSL_set0_CA_list(SSL *s, STACK_OF(X509_NAME) *name_list);
void SSL_CTX_set0_CA_list(SSL_CTX *ctx, STACK_OF(X509_NAME) *name_list);
__owur const STACK_OF(X509_NAME) *SSL_get0_CA_list(const SSL *s);
__owur const STACK_OF(X509_NAME) *SSL_CTX_get0_CA_list(const SSL_CTX *ctx);
__owur int SSL_add1_to_CA_list(SSL *ssl, const X509 *x);
__owur int SSL_CTX_add1_to_CA_list(SSL_CTX *ctx, const X509 *x);
__owur const STACK_OF(X509_NAME) *SSL_get0_peer_CA_list(const SSL *s);

void SSL_set_client_CA_list(SSL *s, STACK_OF(X509_NAME) *name_list);
void SSL_CTX_set_client_CA_list(SSL_CTX
 *ctx, STACK_OF(X509_NAME) *name_list);
__owur STACK_OF(X509_NAME) *SSL_get_client_CA_list(const SSL *s);
__owur STACK_OF(X509_NAME) *SSL_CTX_get_client_CA_list(const SSL_CTX *s);
__owur int SSL_add_client_CA(SSL *ssl, X509 *x);
__owur int SSL_CTX_add_client_CA(SSL_CTX *ctx, X509 *x);

void SSL_set_connect_state(SSL *s);
void SSL_set_accept_state(SSL *s);

__owur long SSL_get_default_timeout(const SSL *s);

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define SSL_library_init() OPENSSL_init_ssl(0, NULL)
# endif

__owur char *SSL_CIPHER_description(const SSL_CIPHER *, char *buf, int size);
__owur STACK_OF(X509_NAME) *SSL_dup_CA_list(const STACK_OF(X509_NAME) *sk);

__owur SSL *SSL_dup(SSL *ssl);

__owur X509 *SSL_get_certificate(const SSL *ssl);
/*
* EVP_PKEY
*/
struct evp_pkey_st *SSL_get_privatekey(const SSL *ssl);

__owur X509 *SSL_CTX_get0_certificate(const SSL_CTX *ctx);
__owur EVP_PKEY *SSL_CTX_get0_privatekey(const SSL_CTX *ctx);

void SSL_CTX_set_quiet_shutdown(SSL_CTX
 *ctx, int mode);
__owur int SSL_CTX_get_quiet_shutdown(const SSL_CTX *ctx);
void SSL_set_quiet_shutdown(SSL *ssl, int mode);
__owur int SSL_get_quiet_shutdown(const SSL *ssl);
void SSL_set_shutdown(SSL *ssl, int mode);
__owur int SSL_get_shutdown(const SSL *ssl);
```

```
__owur int SSL_version(const SSL *ssl);
__owur int SSL_client_version(const SSL *s);
__owur int SSL_CTX_set_default_verify_paths(SSL_CTX *ctx);
__owur int SSL_CTX_set_default_verify_dir(SSL_CTX *ctx);
__owur int SSL_CTX_set_default_verify_file(SSL_CTX *ctx);
__owur int SSL_CTX_set_default_verify_store(SSL_CTX *ctx);
__owur int SSL_CTX_load_verify_file(SSL_CTX *ctx, const char *CAfile);
__owur int SSL_CTX_load_verify_dir(SSL_CTX *ctx, const char *CApath);
__owur int SSL_CTX_load_verify_store(SSL_CTX *ctx, const char *CAstore);
__owur int SSL_CTX_load_verify_locations(SSL_CTX *ctx,
                                         const char *CAfile,
                                         const
 char *CApath);
# define SSL_get0_session SSL_get_session/* just peek at pointer */
__owur SSL_SESSION *SSL_get_session(const SSL *ssl);
__owur SSL_SESSION *SSL_get1_session(SSL *ssl); /* obtain a reference count */
__owur SSL_CTX *SSL_get_SSL_CTX(const SSL *ssl);
SSL_CTX *SSL_set_SSL_CTX(SSL *ssl, SSL_CTX *ctx);
void SSL_set_info_callback(SSL *ssl,
                           void (*cb) (const SSL *ssl, int type, int val));
void (*SSL_get_info_callback(const SSL *ssl)) (const SSL *ssl, int type,
                                               int val);
__owur OSSL_HANDSHAKE_STATE SSL_get_state(const SSL *ssl);

void SSL_set_verify_result(SSL *ssl, long v);
__owur long SSL_get_verify_result(const SSL *ssl);
__owur STACK_OF(X509) *SSL_get0_verified_chain(const SSL *s);

__owur size_t SSL_get_client_random(const SSL *ssl, unsigned char *out,
                                    size_t outlen);
__owur size_t SSL_get_server_random(const SSL *ssl, unsigned char *out,

                                    size_t outlen);
__owur size_t SSL_SESSION_get_master_key(const SSL_SESSION *sess,
                                         unsigned char *out, size_t outlen);
__owur int SSL_SESSION_set1_master_key(SSL_SESSION *sess,
                                       const unsigned char *in, size_t len);
uint8_t SSL_SESSION_get_max_fragment_length(const SSL_SESSION *sess);

#define SSL_get_ex_new_index(l, p, newf, dupf, freef) \
  CRYPTO_get_ex_new_index(CRYPTO_EX_INDEX_SSL, l, p, newf, dupf, freef)
__owur int SSL_set_ex_data(SSL *ssl, int idx, void *data);
void *SSL_get_ex_data(const SSL *ssl, int idx);
#define SSL_SESSION_get_ex_new_index(l, p, newf, dupf, freef) \
  CRYPTO_get_ex_new_index(CRYPTO_EX_INDEX_SSL_SESSION, l, p, newf, dupf, freef)
__owur int SSL_SESSION_set_ex_data(SSL_SESSION *ss, int idx, void *data);
void *SSL_SESSION_get_ex_data(const SSL_SESSION *ss, int idx);
#define SSL_CTX_get_ex_new_index(l, p, newf, dupf, freef) \
```

```
   CRYPTO_get_ex_new_index(CRYPTO_EX_INDEX_SSL_CTX,
 l, p, newf, dupf, freef)
__owur int SSL_CTX_set_ex_data(SSL_CTX *ssl, int idx, void *data);
void *SSL_CTX_get_ex_data(const SSL_CTX *ssl, int idx);

__owur int SSL_get_ex_data_X509_STORE_CTX_idx(void);

# define SSL_CTX_sess_set_cache_size(ctx,t) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_SET_SESS_CACHE_SIZE,t,NULL)
# define SSL_CTX_sess_get_cache_size(ctx) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_GET_SESS_CACHE_SIZE,0,NULL)
# define SSL_CTX_set_session_cache_mode(ctx,m) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_SET_SESS_CACHE_MODE,m,NULL)
# define SSL_CTX_get_session_cache_mode(ctx) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_GET_SESS_CACHE_MODE,0,NULL)

# define SSL_CTX_get_default_read_ahead(ctx) SSL_CTX_get_read_ahead(ctx)
# define SSL_CTX_set_default_read_ahead(ctx,m) SSL_CTX_set_read_ahead(ctx,m)
# define SSL_CTX_get_read_ahead(ctx) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_GET_READ_AHEAD,0,NULL)
# define SSL_CTX_set_read_ahead(ctx,m) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_SET_READ_AHEAD,m,NULL)
# define
 SSL_CTX_get_max_cert_list(ctx) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_GET_MAX_CERT_LIST,0,NULL)
# define SSL_CTX_set_max_cert_list(ctx,m) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_SET_MAX_CERT_LIST,m,NULL)
# define SSL_get_max_cert_list(ssl) \
      SSL_ctrl(ssl,SSL_CTRL_GET_MAX_CERT_LIST,0,NULL)
# define SSL_set_max_cert_list(ssl,m) \
      SSL_ctrl(ssl,SSL_CTRL_SET_MAX_CERT_LIST,m,NULL)

# define SSL_CTX_set_max_send_fragment(ctx,m) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_SET_MAX_SEND_FRAGMENT,m,NULL)
# define SSL_set_max_send_fragment(ssl,m) \
      SSL_ctrl(ssl,SSL_CTRL_SET_MAX_SEND_FRAGMENT,m,NULL)
# define SSL_CTX_set_split_send_fragment(ctx,m) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_SET_SPLIT_SEND_FRAGMENT,m,NULL)
# define SSL_set_split_send_fragment(ssl,m) \
      SSL_ctrl(ssl,SSL_CTRL_SET_SPLIT_SEND_FRAGMENT,m,NULL)
# define SSL_CTX_set_max_pipelines(ctx,m) \
      SSL_CTX_ctrl(ctx,SSL_CTRL_SET_MAX_PIPELINES,m,NULL)
# define SSL_set_max_pipelines(ssl,m) \
      SSL_ctrl(ssl,SSL_CTRL_SET_MAX_PIPELINES,m,NULL)
#
 define SSL_set_retry_verify(ssl) \
      (SSL_ctrl(ssl,SSL_CTRL_SET_RETRY_VERIFY,0,NULL) > 0)
```

```
void SSL_CTX_set_default_read_buffer_len(SSL_CTX *ctx, size_t len);
void SSL_set_default_read_buffer_len(SSL *s, size_t len);

# ifndef OPENSSL_NO_DH
#  ifndef OPENSSL_NO_DEPRECATED_3_0
/* NB: the |keylength| is only applicable when is_export is true */
OSSL_DEPRECATEDIN_3_0
void SSL_CTX_set_tmp_dh_callback(SSL_CTX *ctx,
                         DH *(*dh) (SSL *ssl, int is_export,
                                    int keylength));
OSSL_DEPRECATEDIN_3_0
void SSL_set_tmp_dh_callback(SSL *ssl,
                     DH *(*dh) (SSL *ssl, int is_export,
                                int keylength));
#  endif
# endif

__owur const COMP_METHOD *SSL_get_current_compression(const SSL *s);
__owur const COMP_METHOD *SSL_get_current_expansion(const SSL *s);
__owur const char *SSL_COMP_get_name(const COMP_METHOD *comp);
__owur const char *SSL_COMP_get0_name(const
 SSL_COMP *comp);
__owur int SSL_COMP_get_id(const SSL_COMP *comp);
STACK_OF(SSL_COMP) *SSL_COMP_get_compression_methods(void);
__owur STACK_OF(SSL_COMP) *SSL_COMP_set0_compression_methods(STACK_OF(SSL_COMP)
                                          *meths);
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define SSL_COMP_free_compression_methods() while(0) continue
# endif
__owur int SSL_COMP_add_compression_method(int id, COMP_METHOD *cm);

const SSL_CIPHER *SSL_CIPHER_find(SSL *ssl, const unsigned char *ptr);
int SSL_CIPHER_get_cipher_nid(const SSL_CIPHER *c);
int SSL_CIPHER_get_digest_nid(const SSL_CIPHER *c);
int SSL_bytes_to_cipher_list(SSL *s, const unsigned char *bytes, size_t len,
                     int isv2format, STACK_OF(SSL_CIPHER) **sk,
                     STACK_OF(SSL_CIPHER) **scsvs);

/* TLS extensions functions */
__owur int SSL_set_session_ticket_ext(SSL *s, void *ext_data, int ext_len);

__owur int SSL_set_session_ticket_ext_cb(SSL
 *s,
                                 tls_session_ticket_ext_cb_fn cb,
                                 void *arg);

/* Pre-shared secret session resumption functions */
__owur int SSL_set_session_secret_cb(SSL *s,
```

```
                            tls_session_secret_cb_fn session_secret_cb,
                            void *arg);

void SSL_CTX_set_not_resumable_session_callback(SSL_CTX *ctx,
                                    int (*cb) (SSL *ssl,
                                               int
                                               is_forward_secure));

void SSL_set_not_resumable_session_callback(SSL *ssl,
                                    int (*cb) (SSL *ssl,
                                               int is_forward_secure));

void SSL_CTX_set_record_padding_callback(SSL_CTX *ctx,
                                 size_t (*cb) (SSL *ssl, int type,

                                  size_t len, void *arg));
void SSL_CTX_set_record_padding_callback_arg(SSL_CTX *ctx, void *arg);
void *SSL_CTX_get_record_padding_callback_arg(const SSL_CTX *ctx);
int SSL_CTX_set_block_padding(SSL_CTX *ctx, size_t block_size);

int SSL_set_record_padding_callback(SSL *ssl,
                            size_t (*cb) (SSL *ssl, int type,
                                          size_t len, void *arg));
void SSL_set_record_padding_callback_arg(SSL *ssl, void *arg);
void *SSL_get_record_padding_callback_arg(const SSL *ssl);
int SSL_set_block_padding(SSL *ssl, size_t block_size);

int SSL_set_num_tickets(SSL *s, size_t num_tickets);
size_t SSL_get_num_tickets(const SSL *s);
int SSL_CTX_set_num_tickets(SSL_CTX *ctx, size_t num_tickets);
size_t SSL_CTX_get_num_tickets(const SSL_CTX *ctx);

# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define SSL_cache_hit(s) SSL_session_reused(s)
# endif

__owur int SSL_session_reused(const SSL *s);
__owur int
 SSL_is_server(const SSL *s);

__owur __owur SSL_CONF_CTX *SSL_CONF_CTX_new(void);
int SSL_CONF_CTX_finish(SSL_CONF_CTX *cctx);
void SSL_CONF_CTX_free(SSL_CONF_CTX *cctx);
unsigned int SSL_CONF_CTX_set_flags(SSL_CONF_CTX *cctx, unsigned int flags);
__owur unsigned int SSL_CONF_CTX_clear_flags(SSL_CONF_CTX *cctx,
                                 unsigned int flags);
__owur int SSL_CONF_CTX_set1_prefix(SSL_CONF_CTX *cctx, const char *pre);
```

```
void SSL_CONF_CTX_set_ssl(SSL_CONF_CTX *cctx, SSL *ssl);
void SSL_CONF_CTX_set_ssl_ctx(SSL_CONF_CTX *cctx, SSL_CTX *ctx);

__owur int SSL_CONF_cmd(SSL_CONF_CTX *cctx, const char *cmd, const char *value);
__owur int SSL_CONF_cmd_argv(SSL_CONF_CTX *cctx, int *pargc, char ***pargv);
__owur int SSL_CONF_cmd_value_type(SSL_CONF_CTX *cctx, const char *cmd);

void SSL_add_ssl_module(void);
int SSL_config(SSL *s, const char *name);
int SSL_CTX_config(SSL_CTX *ctx, const char *name);

# ifndef OPENSSL_NO_SSL_TRACE
void SSL_trace(int write_p, int version,
 int content_type,
            const void *buf, size_t len, SSL *ssl, void *arg);
# endif

# ifndef OPENSSL_NO_SOCK
int DTLSv1_listen(SSL *s, BIO_ADDR *client);
# endif

# ifndef OPENSSL_NO_CT

/*
* A callback for verifying that the received SCTs are sufficient.
* Expected to return 1 if they are sufficient, otherwise 0.
* May return a negative integer if an error occurs.
* A connection should be aborted if the SCTs are deemed insufficient.
*/
typedef int (*ssl_ct_validation_cb)(const CT_POLICY_EVAL_CTX *ctx,
                                    const STACK_OF(SCT) *scts, void *arg);

/*
* Sets a |callback| that is invoked upon receipt of ServerHelloDone to validate
* the received SCTs.
* If the callback returns a non-positive result, the connection is terminated.
* Call this function before beginning a handshake.
* If a NULL |callback| is provided, SCT validation is disabled.
* |arg| is arbitrary userdata that will be passed to the callback whenever it
* is invoked.
 Ownership of |arg| remains with the caller.
*
* NOTE: A side-effect of setting a CT callback is that an OCSP stapled response
*       will be requested.
*/
int SSL_set_ct_validation_callback(SSL *s, ssl_ct_validation_cb callback,
                                   void *arg);
int SSL_CTX_set_ct_validation_callback(SSL_CTX *ctx,
```

```
                            ssl_ct_validation_cb callback,
                            void *arg);
#define SSL_disable_ct(s) \
        ((void) SSL_set_validation_callback((s), NULL, NULL))
#define SSL_CTX_disable_ct(ctx) \
        ((void) SSL_CTX_set_validation_callback((ctx), NULL, NULL))

/*
* The validation type enumerates the available behaviours of the built-in SSL
* CT validation callback selected via SSL_enable_ct() and SSL_CTX_enable_ct().
* The underlying callback is a static function in libssl.
*/
enum {
  SSL_CT_VALIDATION_PERMISSIVE = 0,
  SSL_CT_VALIDATION_STRICT
};

/*
* Enable CT by setting up a callback that implements
 one of the built-in
* validation variants.  The SSL_CT_VALIDATION_PERMISSIVE variant always
* continues the handshake, the application can make appropriate decisions at
* handshake completion.  The SSL_CT_VALIDATION_STRICT variant requires at
* least one valid SCT, or else handshake termination will be requested.  The
* handshake may continue anyway if SSL_VERIFY_NONE is in effect.
*/
int SSL_enable_ct(SSL *s, int validation_mode);
int SSL_CTX_enable_ct(SSL_CTX *ctx, int validation_mode);

/*
* Report whether a non-NULL callback is enabled.
*/
int SSL_ct_is_enabled(const SSL *s);
int SSL_CTX_ct_is_enabled(const SSL_CTX *ctx);

/* Gets the SCTs received from a connection */
const STACK_OF(SCT) *SSL_get0_peer_scts(SSL *s);

/*
* Loads the CT log list from the default location.
* If a CTLOG_STORE has previously been set using SSL_CTX_set_ctlog_store,
* the log information loaded from this file will be appended to the
* CTLOG_STORE.
* Returns 1 on success, 0 otherwise.
 */
int SSL_CTX_set_default_ctlog_list_file(SSL_CTX *ctx);

/*
```

```
* Loads the CT log list from the specified file path.
* If a CTLOG_STORE has previously been set using SSL_CTX_set_ctlog_store,
* the log information loaded from this file will be appended to the
* CTLOG_STORE.
* Returns 1 on success, 0 otherwise.
*/
int SSL_CTX_set_ctlog_list_file(SSL_CTX *ctx, const char *path);

/*
* Sets the CT log list used by all SSL connections created from this SSL_CTX.
* Ownership of the CTLOG_STORE is transferred to the SSL_CTX.
*/
void SSL_CTX_set0_ctlog_store(SSL_CTX *ctx, CTLOG_STORE *logs);

/*
* Gets the CT log list used by all SSL connections created from this SSL_CTX.
* This will be NULL unless one of the following functions has been called:
* - SSL_CTX_set_default_ctlog_list_file
* - SSL_CTX_set_ctlog_list_file
* - SSL_CTX_set_ctlog_store
*/
const CTLOG_STORE *SSL_CTX_get0_ctlog_store(const SSL_CTX *ctx);

# endif /* OPENSSL_NO_CT */

/* What the "other" parameter contains
 in security callback */
/* Mask for type */
# define SSL_SECOP_OTHER_TYPE    0xffff0000
# define SSL_SECOP_OTHER_NONE    0
# define SSL_SECOP_OTHER_CIPHER  (1 << 16)
# define SSL_SECOP_OTHER_CURVE   (2 << 16)
# define SSL_SECOP_OTHER_DH      (3 << 16)
# define SSL_SECOP_OTHER_PKEY    (4 << 16)
# define SSL_SECOP_OTHER_SIGALG  (5 << 16)
# define SSL_SECOP_OTHER_CERT    (6 << 16)

/* Indicated operation refers to peer key or certificate */
# define SSL_SECOP_PEER          0x1000

/* Values for "op" parameter in security callback */

/* Called to filter ciphers */
/* Ciphers client supports */
# define SSL_SECOP_CIPHER_SUPPORTED      (1 | SSL_SECOP_OTHER_CIPHER)
/* Cipher shared by client/server */
# define SSL_SECOP_CIPHER_SHARED         (2 | SSL_SECOP_OTHER_CIPHER)
/* Sanity check of cipher server selects */
```

```
# define SSL_SECOP_CIPHER_CHECK          (3 | SSL_SECOP_OTHER_CIPHER)
/* Curves supported by client */
# define SSL_SECOP_CURVE_SUPPORTED       (4 | SSL_SECOP_OTHER_CURVE)
/* Curves
 shared by client/server */
# define SSL_SECOP_CURVE_SHARED          (5 | SSL_SECOP_OTHER_CURVE)
/* Sanity check of curve server selects */
# define SSL_SECOP_CURVE_CHECK           (6 | SSL_SECOP_OTHER_CURVE)
/* Temporary DH key */
# define SSL_SECOP_TMP_DH                (7 | SSL_SECOP_OTHER_PKEY)
/* SSL/TLS version */
# define SSL_SECOP_VERSION               (9 | SSL_SECOP_OTHER_NONE)
/* Session tickets */
# define SSL_SECOP_TICKET                (10 | SSL_SECOP_OTHER_NONE)
/* Supported signature algorithms sent to peer */
# define SSL_SECOP_SIGALG_SUPPORTED      (11 | SSL_SECOP_OTHER_SIGALG)
/* Shared signature algorithm */
# define SSL_SECOP_SIGALG_SHARED         (12 | SSL_SECOP_OTHER_SIGALG)
/* Sanity check signature algorithm allowed */
# define SSL_SECOP_SIGALG_CHECK          (13 | SSL_SECOP_OTHER_SIGALG)
/* Used to get mask of supported public key signature algorithms */
# define SSL_SECOP_SIGALG_MASK           (14 | SSL_SECOP_OTHER_SIGALG)
/* Use to see if compression is allowed
 */
# define SSL_SECOP_COMPRESSION           (15 | SSL_SECOP_OTHER_NONE)
/* EE key in certificate */
# define SSL_SECOP_EE_KEY                (16 | SSL_SECOP_OTHER_CERT)
/* CA key in certificate */
# define SSL_SECOP_CA_KEY                (17 | SSL_SECOP_OTHER_CERT)
/* CA digest algorithm in certificate */
# define SSL_SECOP_CA_MD                 (18 | SSL_SECOP_OTHER_CERT)
/* Peer EE key in certificate */
# define SSL_SECOP_PEER_EE_KEY           (SSL_SECOP_EE_KEY | SSL_SECOP_PEER)
/* Peer CA key in certificate */
# define SSL_SECOP_PEER_CA_KEY           (SSL_SECOP_CA_KEY | SSL_SECOP_PEER)
/* Peer CA digest algorithm in certificate */
# define SSL_SECOP_PEER_CA_MD            (SSL_SECOP_CA_MD | SSL_SECOP_PEER)

void SSL_set_security_level(SSL *s, int level);
__owur int SSL_get_security_level(const SSL *s);
void SSL_set_security_callback(SSL *s,
                               int (*cb) (const SSL *s, const SSL_CTX *ctx,
                                          int op, int bits, int nid,
                                          void *other, void *ex));
int (*SSL_get_security_callback(const SSL *s)) (const SSL *s,
                                                const SSL_CTX *ctx, int op,
                                                int bits, int nid, void *other,
                                                void *ex);
```

```
void SSL_set0_security_ex_data(SSL *s, void *ex);
__owur void *SSL_get0_security_ex_data(const SSL *s);

void SSL_CTX_set_security_level(SSL_CTX *ctx, int level);
__owur int SSL_CTX_get_security_level(const SSL_CTX *ctx);
void SSL_CTX_set_security_callback(SSL_CTX *ctx,
                                   int (*cb) (const SSL *s, const SSL_CTX *ctx,
                                              int op, int bits, int nid,
                                              void *other, void *ex));
int (*SSL_CTX_get_security_callback(const SSL_CTX *ctx)) (const SSL *s,
                                                          const SSL_CTX *ctx,

                                                        int op, int bits,
                                                          int nid,
                                                          void *other,
                                                          void *ex);
void SSL_CTX_set0_security_ex_data(SSL_CTX *ctx, void *ex);
__owur void *SSL_CTX_get0_security_ex_data(const SSL_CTX *ctx);

/* OPENSSL_INIT flag 0x010000 reserved for internal use */
# define OPENSSL_INIT_NO_LOAD_SSL_STRINGS    0x00100000L
# define OPENSSL_INIT_LOAD_SSL_STRINGS       0x00200000L

# define OPENSSL_INIT_SSL_DEFAULT \
      (OPENSSL_INIT_LOAD_SSL_STRINGS | OPENSSL_INIT_LOAD_CRYPTO_STRINGS)

int OPENSSL_init_ssl(uint64_t opts, const OPENSSL_INIT_SETTINGS *settings);

# ifndef OPENSSL_NO_UNIT_TEST
__owur const struct openssl_ssl_test_functions *SSL_test_functions(void);
# endif

__owur int SSL_free_buffers(SSL *ssl);
__owur int SSL_alloc_buffers(SSL *ssl);

/* Status codes passed to the decrypt session
 ticket callback. Some of these
* are for internal use only and are never passed to the callback. */
typedef int SSL_TICKET_STATUS;

/* Support for ticket appdata */
/* fatal error, malloc failure */
# define SSL_TICKET_FATAL_ERR_MALLOC 0
/* fatal error, either from parsing or decrypting the ticket */
# define SSL_TICKET_FATAL_ERR_OTHER  1
/* No ticket present */
# define SSL_TICKET_NONE             2
/* Empty ticket present */
```

```
# define SSL_TICKET_EMPTY          3
/* the ticket couldn't be decrypted */
# define SSL_TICKET_NO_DECRYPT      4
/* a ticket was successfully decrypted */
# define SSL_TICKET_SUCCESS         5
/* same as above but the ticket needs to be renewed */
# define SSL_TICKET_SUCCESS_RENEW    6

/* Return codes for the decrypt session ticket callback */
typedef int SSL_TICKET_RETURN;

/* An error occurred */
#define SSL_TICKET_RETURN_ABORT           0
/* Do not use the ticket, do not send a renewed ticket to the client */
#define SSL_TICKET_RETURN_IGNORE
    1
/* Do not use the ticket, send a renewed ticket to the client */
#define SSL_TICKET_RETURN_IGNORE_RENEW     2
/* Use the ticket, do not send a renewed ticket to the client */
#define SSL_TICKET_RETURN_USE             3
/* Use the ticket, send a renewed ticket to the client */
#define SSL_TICKET_RETURN_USE_RENEW        4

typedef int (*SSL_CTX_generate_session_ticket_fn)(SSL *s, void *arg);
typedef SSL_TICKET_RETURN (*SSL_CTX_decrypt_session_ticket_fn)(SSL *s, SSL_SESSION *ss,
                                        const unsigned char *keyname,
                                        size_t keyname_length,
                                        SSL_TICKET_STATUS status,
                                        void *arg);
int SSL_CTX_set_session_ticket_cb(SSL_CTX *ctx,
                          SSL_CTX_generate_session_ticket_fn gen_cb,
                          SSL_CTX_decrypt_session_ticket_fn
 dec_cb,
                          void *arg);
int SSL_SESSION_set1_ticket_appdata(SSL_SESSION *ss, const void *data, size_t len);
int SSL_SESSION_get0_ticket_appdata(SSL_SESSION *ss, void **data, size_t *len);

typedef unsigned int (*DTLS_timer_cb)(SSL *s, unsigned int timer_us);

void DTLS_set_timer_cb(SSL *s, DTLS_timer_cb cb);


typedef int (*SSL_allow_early_data_cb_fn)(SSL *s, void *arg);
void SSL_CTX_set_allow_early_data_cb(SSL_CTX *ctx,
                             SSL_allow_early_data_cb_fn cb,
                             void *arg);
void SSL_set_allow_early_data_cb(SSL *s,
                         SSL_allow_early_data_cb_fn cb,
```

```
                        void *arg);

/* store the default cipher strings inside the library */
const char *OSSL_default_cipher_list(void);
const char *OSSL_default_ciphersuites(void);

# ifdef  __cplusplus
}
# endif
#endif
```

Protected File

Example of a protected file to be used in the PolicyDenyFs module
(The MIT License)

Copyright (c) 2013 Nathan Rajlich <nathan@tootallnate.net>

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
'Software'), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED 'AS IS', WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING
 FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (C) 2011 by Beau Gunderson

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

```
{
 'variables': {
   'openssl_defines_BSD-x86_64': [
     'NDEBUG',
     'L_ENDIAN',
     'OPENSSL_BUILDING_OPENSSL',
     'AES_ASM',
     'BSAES_ASM',
     'CMLL_ASM',
     'ECP_NISTZ256_ASM',
     'GHASH_ASM',
     'KECCAK1600_ASM',
     'MD5_ASM',
     'OPENSSL_BN_ASM_GF2m',
     'OPENSSL_BN_ASM_MONT',
     'OPENSSL_BN_ASM_MONT5',
     'OPENSSL_CPUID_OBJ',
     'OPENSSL_IA32_SSE2',
     'PADLOCK_ASM',
     'POLY1305_ASM',
     'RC4_ASM',
     'SHA1_ASM',
     'SHA256_ASM',
     'SHA512_ASM',
     'VPAES_ASM',
     'WHIRLPOOL_ASM',
     'X25519_ASM',
     'OPENSSL_PIC',
   ],
   'openssl_cflags_BSD-x86_64': [
     '-Wa,--noexecstack',
     '-Wall -O3',
     '-pthread',
     '-Wall -O3',
   ],
   'openssl_ex_libs_BSD-x86_64': [
     '-pthread',
   ],
   'openssl_cli_srcs_BSD-x86_64': [
     'openssl/apps/lib/cmp_mock_srv.c',
```

'openssl/apps/asn1parse.c',
'openssl/apps/ca.c',
'openssl/apps/ciphers.c',
'openssl/apps/cmp.c',

'openssl/apps/cms.c',
'openssl/apps/crl.c',
'openssl/apps/crl2pkcs7.c',
'openssl/apps/dgst.c',
'openssl/apps/dhparam.c',
'openssl/apps/dsa.c',
'openssl/apps/dsaparam.c',
'openssl/apps/ec.c',
'openssl/apps/ecparam.c',
'openssl/apps/enc.c',
'openssl/apps/engine.c',
'openssl/apps/errstr.c',
'openssl/apps/fipsinstall.c',
'openssl/apps/gendsa.c',
'openssl/apps/genpkey.c',
'openssl/apps/genrsa.c',
'openssl/apps/info.c',
'openssl/apps/kdf.c',
'openssl/apps/list.c',
'openssl/apps/mac.c',
'openssl/apps/nseq.c',
'openssl/apps/ocsp.c',
'openssl/apps/openssl.c',
'openssl/apps/passwd.c',
'openssl/apps/pkcs12.c',
'openssl/apps/pkcs7.c',
'openssl/apps/pkcs8.c',
'openssl/apps/pkey.c',
'openssl/apps/pkeyparam.c',
'openssl/apps/pkeyutl.c',
'openssl/apps/prime.c',
'./config/archs/BSD-x86_64/asm/apps/progs.c',
'openssl/apps/rand.c',
'openssl/apps/rehash.c',
'openssl/apps/req.c',
'openssl/apps/rsa.c',
'openssl/apps/rsautl.c',
'openssl/apps/s_client.c',
'openssl/apps/s_server.c',
'openssl/apps/s_time.c',
'openssl/apps/sess_id.c',
'openssl/apps/smime.c',
'openssl/apps/speed.c',

```
    'openssl/apps/spkac.c',
    'openssl/apps/srp.c',
    'openssl/apps/storeutl.c',
    'openssl/apps/ts.c',
    'openssl/apps/verify.c',
    'openssl/apps/version.c',
    'openssl/apps/x509.c',
    'openssl/apps/lib/app_libctx.c',
    'openssl/apps/lib/app_params.c',
    'openssl/apps/lib/app_provider.c',
    'openssl/apps/lib/app_rand.c',
    'openssl/apps/lib/app_x509.c',
    'openssl/apps/lib/apps.c',
    'openssl/apps/lib/apps_ui.c',
    'openssl/apps/lib/columns.c',
    'openssl/apps/lib/engine.c',
    'openssl/apps/lib/engine_loader.c',
    'openssl/apps/lib/fmt.c',
    'openssl/apps/lib/http_server.c',
    'openssl/apps/lib/names.c',
     'openssl/apps/lib/opt.c',
    'openssl/apps/lib/s_cb.c',
    'openssl/apps/lib/s_socket.c',
    'openssl/apps/lib/tlssrp_depr.c',
  ],
 },
 'defines': ['<@(openssl_defines_BSD-x86_64)'],
 'include_dirs': [
   './include',
 ],
 'cflags' : ['<@(openssl_cflags_BSD-x86_64)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],
 'sources': ['<@(openssl_cli_srcs_BSD-x86_64)'],
}
```

(The MIT License)

Copyright (c) 2014-2017 TJ Holowaychuk <tj@vision-media.ca>
Copyright (c) 2018-2021 Josh Junon

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the 'Software'), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED 'AS IS', WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT
LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
{
 'variables': {
   'openssl_sources': [
     'openssl/ssl/bio_ssl.c',
     'openssl/ssl/d1_lib.c',
     'openssl/ssl/d1_msg.c',
     'openssl/ssl/d1_srtp.c',
     'openssl/ssl/methods.c',
     'openssl/ssl/pqueue.c',
     'openssl/ssl/s3_enc.c',
     'openssl/ssl/s3_lib.c',
     'openssl/ssl/s3_msg.c',
     'openssl/ssl/ssl_asn1.c',
     'openssl/ssl/ssl_cert.c',
     'openssl/ssl/ssl_ciph.c',
     'openssl/ssl/ssl_conf.c',
     'openssl/ssl/ssl_err.c',
     'openssl/ssl/ssl_err_legacy.c',
     'openssl/ssl/ssl_init.c',
     'openssl/ssl/ssl_lib.c',
     'openssl/ssl/ssl_mcnf.c',
     'openssl/ssl/ssl_rsa.c',
     'openssl/ssl/ssl_rsa_legacy.c',
     'openssl/ssl/ssl_sess.c',
     'openssl/ssl/ssl_stat.c',
     'openssl/ssl/ssl_txt.c',
     'openssl/ssl/ssl_utst.c',
     'openssl/ssl/t1_enc.c',
     'openssl/ssl/t1_lib.c',
     'openssl/ssl/t1_trce.c',
     'openssl/ssl/tls13_enc.c',
     'openssl/ssl/tls_depr.c',
     'openssl/ssl/tls_srp.c',
     'openssl/ssl/record/dtls1_bitmap.c',
      'openssl/ssl/record/rec_layer_d1.c',
     'openssl/ssl/record/rec_layer_s3.c',
     'openssl/ssl/record/ssl3_buffer.c',
     'openssl/ssl/record/ssl3_record.c',
     'openssl/ssl/record/ssl3_record_tls13.c',
```

'openssl/ssl/statem/extensions.c',
'openssl/ssl/statem/extensions_clnt.c',
'openssl/ssl/statem/extensions_cust.c',
'openssl/ssl/statem/extensions_srvr.c',
'openssl/ssl/statem/statem.c',
'openssl/ssl/statem/statem_clnt.c',
'openssl/ssl/statem/statem_dtls.c',
'openssl/ssl/statem/statem_lib.c',
'openssl/ssl/statem/statem_srvr.c',
'openssl/crypto/aes/aes_cfb.c',
'openssl/crypto/aes/aes_ecb.c',
'openssl/crypto/aes/aes_ige.c',
'openssl/crypto/aes/aes_misc.c',
'openssl/crypto/aes/aes_ofb.c',
'openssl/crypto/aes/aes_wrap.c',
'openssl/crypto/aria/aria.c',
'openssl/crypto/asn1/a_bitstr.c',
'openssl/crypto/asn1/a_d2i_fp.c',
'openssl/crypto/asn1/a_digest.c',
'openssl/crypto/asn1/a_dup.c',
'openssl/crypto/asn1/a_gentm.c',
'openssl/crypto/asn1/a_i2d_fp.c',
'openssl/crypto/asn1/a_int.c',
'openssl/crypto/asn1/a_mbstr.c',
'openssl/crypto/asn1/a_object.c',
'openssl/crypto/asn1/a_octet.c',
'openssl/crypto/asn1/a_print.c',
'openssl/crypto/asn1/a_sign.c',
'openssl/crypto/asn1/a_strex.c',
'openssl/crypto/asn1/a_strnid.c',
'openssl/crypto/asn1/a_time.c',
'openssl/crypto/asn1/a_type.c',
'openssl/crypto/asn1/a_utctm.c',
'openssl/crypto/asn1/a_utf8.c',
'openssl/crypto/asn1/a_verify.c',
'openssl/crypto/asn1/ameth_lib.c',
'openssl/crypto/asn1/asn1_err.c',
'openssl/crypto/asn1/asn1_gen.c',
'openssl/crypto/asn1/asn1_item_list.c',
'openssl/crypto/asn1/asn1_lib.c',
'openssl/crypto/asn1/asn1_parse.c',
'openssl/crypto/asn1/asn_mime.c',
'openssl/crypto/asn1/asn_moid.c',
'openssl/crypto/asn1/asn_mstbl.c',
'openssl/crypto/asn1/asn_pack.c',
'openssl/crypto/asn1/bio_asn1.c',
'openssl/crypto/asn1/bio_ndef.c',
'openssl/crypto/asn1/d2i_param.c',

'openssl/crypto/asn1/d2i_pr.c',
'openssl/crypto/asn1/d2i_pu.c',
'openssl/crypto/asn1/evp_asn1.c',
'openssl/crypto/asn1/f_int.c',
'openssl/crypto/asn1/f_string.c',
'openssl/crypto/asn1/i2d_evp.c',
'openssl/crypto/asn1/n_pkey.c',
'openssl/crypto/asn1/nsseq.c',
'openssl/crypto/asn1/p5_pbe.c',
'openssl/crypto/asn1/p5_pbev2.c',
'openssl/crypto/asn1/p5_scrypt.c',
'openssl/crypto/asn1/p8_pkey.c',
'openssl/crypto/asn1/t_bitst.c',
'openssl/crypto/asn1/t_pkey.c',
'openssl/crypto/asn1/t_spki.c',
'openssl/crypto/asn1/tasn_dec.c',
'openssl/crypto/asn1/tasn_enc.c',
'openssl/crypto/asn1/tasn_fre.c',
'openssl/crypto/asn1/tasn_new.c',
'openssl/crypto/asn1/tasn_prn.c',
'openssl/crypto/asn1/tasn_scn.c',
'openssl/crypto/asn1/tasn_typ.c',
'openssl/crypto/asn1/tasn_utl.c',
'openssl/crypto/asn1/x_algor.c',
'openssl/crypto/asn1/x_bignum.c',
'openssl/crypto/asn1/x_info.c',
'openssl/crypto/asn1/x_int64.c',
'openssl/crypto/asn1/x_long.c',
'openssl/crypto/asn1/x_pkey.c',
'openssl/crypto/asn1/x_sig.c',
'openssl/crypto/asn1/x_spki.c',
'openssl/crypto/asn1/x_val.c',
'openssl/crypto/async/arch/async_null.c',
'openssl/crypto/async/arch/async_posix.c',
'openssl/crypto/async/arch/async_win.c',
'openssl/crypto/async/async.c',
'openssl/crypto/async/async_err.c',
'openssl/crypto/async/async_wait.c',
'openssl/crypto/bf/bf_cfb64.c',
'openssl/crypto/bf/bf_ecb.c',
'openssl/crypto/bf/bf_enc.c',
'openssl/crypto/bf/bf_ofb64.c',
'openssl/crypto/bf/bf_skey.c',
'openssl/crypto/bio/bf_buff.c',
'openssl/crypto/bio/bf_lbuf.c',
'openssl/crypto/bio/bf_nbio.c',
'openssl/crypto/bio/bf_null.c',

'openssl/crypto/bio/bf_prefix.c',
'openssl/crypto/bio/bf_readbuff.c',
'openssl/crypto/bio/bio_addr.c',
'openssl/crypto/bio/bio_cb.c',
'openssl/crypto/bio/bio_dump.c',
'openssl/crypto/bio/bio_err.c',
'openssl/crypto/bio/bio_lib.c',
'openssl/crypto/bio/bio_meth.c',
'openssl/crypto/bio/bio_print.c',
'openssl/crypto/bio/bio_sock.c',
'openssl/crypto/bio/bio_sock2.c',
'openssl/crypto/bio/bss_acpt.c',
'openssl/crypto/bio/bss_bio.c',
'openssl/crypto/bio/bss_conn.c',
'openssl/crypto/bio/bss_core.c',
'openssl/crypto/bio/bss_dgram.c',
'openssl/crypto/bio/bss_fd.c',
'openssl/crypto/bio/bss_file.c',
'openssl/crypto/bio/bss_log.c',
'openssl/crypto/bio/bss_mem.c',
'openssl/crypto/bio/bss_null.c',
'openssl/crypto/bio/bss_sock.c',
'openssl/crypto/bio/ossl_core_bio.c',
'openssl/crypto/bn/asm/x86_64-gcc.c',
'openssl/crypto/bn/bn_add.c',
'openssl/crypto/bn/bn_blind.c',
'openssl/crypto/bn/bn_const.c',
'openssl/crypto/bn/bn_conv.c',
'openssl/crypto/bn/bn_ctx.c',
'openssl/crypto/bn/bn_depr.c',
'openssl/crypto/bn/bn_dh.c',
'openssl/crypto/bn/bn_div.c',
'openssl/crypto/bn/bn_err.c',
'openssl/crypto/bn/bn_exp.c',
'openssl/crypto/bn/bn_exp2.c',
'openssl/crypto/bn/bn_gcd.c',
'openssl/crypto/bn/bn_gf2m.c',
'openssl/crypto/bn/bn_intern.c',
'openssl/crypto/bn/bn_kron.c',
'openssl/crypto/bn/bn_lib.c',
'openssl/crypto/bn/bn_mod.c',
'openssl/crypto/bn/bn_mont.c',
'openssl/crypto/bn/bn_mpi.c',
'openssl/crypto/bn/bn_mul.c',
'openssl/crypto/bn/bn_nist.c',
'openssl/crypto/bn/bn_prime.c',
'openssl/crypto/bn/bn_print.c',
'openssl/crypto/bn/bn_rand.c',

'openssl/crypto/bn/bn_recp.c',
'openssl/crypto/bn/bn_rsa_fips186_4.c',
'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_srp.c',
'openssl/crypto/bn/bn_word.c',
'openssl/crypto/bn/bn_x931p.c',
'openssl/crypto/bn/rsaz_exp.c',
'openssl/crypto/bn/rsaz_exp_x2.c',
'openssl/crypto/buffer/buf_err.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/camellia/cmll_cfb.c',
'openssl/crypto/camellia/cmll_ctr.c',
'openssl/crypto/camellia/cmll_ecb.c',
'openssl/crypto/camellia/cmll_misc.c',
'openssl/crypto/camellia/cmll_ofb.c',
'openssl/crypto/cast/c_cfb64.c',
'openssl/crypto/cast/c_ecb.c',
'openssl/crypto/cast/c_enc.c',
'openssl/crypto/cast/c_ofb64.c',
'openssl/crypto/cast/c_skey.c',
'openssl/crypto/cmac/cmac.c',
'openssl/crypto/cmp/cmp_asn.c',
'openssl/crypto/cmp/cmp_client.c',
'openssl/crypto/cmp/cmp_ctx.c',
'openssl/crypto/cmp/cmp_err.c',
'openssl/crypto/cmp/cmp_hdr.c',
'openssl/crypto/cmp/cmp_http.c',
'openssl/crypto/cmp/cmp_msg.c',
'openssl/crypto/cmp/cmp_protect.c',
'openssl/crypto/cmp/cmp_server.c',
'openssl/crypto/cmp/cmp_status.c',
'openssl/crypto/cmp/cmp_util.c',
'openssl/crypto/cmp/cmp_vfy.c',
'openssl/crypto/cms/cms_asn1.c',
'openssl/crypto/cms/cms_att.c',
'openssl/crypto/cms/cms_cd.c',
'openssl/crypto/cms/cms_dd.c',
'openssl/crypto/cms/cms_dh.c',
'openssl/crypto/cms/cms_ec.c',
'openssl/crypto/cms/cms_enc.c',
'openssl/crypto/cms/cms_env.c',
'openssl/crypto/cms/cms_err.c',
'openssl/crypto/cms/cms_ess.c',
'openssl/crypto/cms/cms_io.c',
'openssl/crypto/cms/cms_kari.c',
'openssl/crypto/cms/cms_lib.c',

'openssl/crypto/cms/cms_pwri.c',
'openssl/crypto/cms/cms_rsa.c',
'openssl/crypto/cms/cms_sd.c',
'openssl/crypto/cms/cms_smime.c',
'openssl/crypto/conf/conf_api.c',
'openssl/crypto/conf/conf_def.c',
'openssl/crypto/conf/conf_err.c',

'openssl/crypto/conf/conf_lib.c',
'openssl/crypto/conf/conf_mall.c',
'openssl/crypto/conf/conf_mod.c',
'openssl/crypto/conf/conf_sap.c',
'openssl/crypto/conf/conf_ssl.c',
'openssl/crypto/crmf/crmf_asn.c',
'openssl/crypto/crmf/crmf_err.c',
'openssl/crypto/crmf/crmf_lib.c',
'openssl/crypto/crmf/crmf_pbm.c',
'openssl/crypto/ct/ct_b64.c',
'openssl/crypto/ct/ct_err.c',
'openssl/crypto/ct/ct_log.c',
'openssl/crypto/ct/ct_oct.c',
'openssl/crypto/ct/ct_policy.c',
'openssl/crypto/ct/ct_prn.c',
'openssl/crypto/ct/ct_sct.c',
'openssl/crypto/ct/ct_sct_ctx.c',
'openssl/crypto/ct/ct_vfy.c',
'openssl/crypto/ct/ct_x509v3.c',
'openssl/crypto/des/cbc_cksm.c',
'openssl/crypto/des/cbc_enc.c',
'openssl/crypto/des/cfb64ede.c',
'openssl/crypto/des/cfb64enc.c',
'openssl/crypto/des/cfb_enc.c',
'openssl/crypto/des/des_enc.c',
'openssl/crypto/des/ecb3_enc.c',

'openssl/crypto/des/ecb_enc.c',
'openssl/crypto/des/fcrypt.c',
'openssl/crypto/des/fcrypt_b.c',
'openssl/crypto/des/ofb64ede.c',
'openssl/crypto/des/ofb64enc.c',
'openssl/crypto/des/ofb_enc.c',
'openssl/crypto/des/pcbc_enc.c',
'openssl/crypto/des/qud_cksm.c',
'openssl/crypto/des/rand_key.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/des/str2key.c',
'openssl/crypto/des/xcbc_enc.c',
'openssl/crypto/dh/dh_ameth.c',

'openssl/crypto/dh/dh_asn1.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_depr.c',
'openssl/crypto/dh/dh_err.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dh/dh_meth.c',
'openssl/crypto/dh/dh_pmeth.c',
'openssl/crypto/dh/dh_prn.c',
'openssl/crypto/dh/dh_rfc5114.c',
'openssl/crypto/dsa/dsa_ameth.c',
'openssl/crypto/dsa/dsa_asn1.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_depr.c',
'openssl/crypto/dsa/dsa_err.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_meth.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_pmeth.c',
'openssl/crypto/dsa/dsa_prn.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/dso/dso_dl.c',
'openssl/crypto/dso/dso_dlfcn.c',
'openssl/crypto/dso/dso_err.c',
'openssl/crypto/dso/dso_lib.c',
'openssl/crypto/dso/dso_openssl.c',
'openssl/crypto/dso/dso_vms.c',
'openssl/crypto/dso/dso_win32.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_ameth.c',
'openssl/crypto/ec/ec_asn1.c',

'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_deprecated.c',
'openssl/crypto/ec/ec_err.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ec_pmeth.c',
'openssl/crypto/ec/ec_print.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/eck_prn.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_nistz256.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/ec/ecx_meth.c',
'openssl/crypto/encode_decode/decoder_err.c',
'openssl/crypto/encode_decode/decoder_lib.c',
'openssl/crypto/encode_decode/decoder_meth.c',
'openssl/crypto/encode_decode/decoder_pkey.c',
'openssl/crypto/encode_decode/encoder_err.c',
'openssl/crypto/encode_decode/encoder_lib.c',
'openssl/crypto/encode_decode/encoder_meth.c',
'openssl/crypto/encode_decode/encoder_pkey.c',
'openssl/crypto/engine/eng_all.c',
'openssl/crypto/engine/eng_cnf.c',
'openssl/crypto/engine/eng_ctrl.c',

'openssl/crypto/engine/eng_dyn.c',
'openssl/crypto/engine/eng_err.c',
'openssl/crypto/engine/eng_fat.c',
'openssl/crypto/engine/eng_init.c',
'openssl/crypto/engine/eng_lib.c',
'openssl/crypto/engine/eng_list.c',
'openssl/crypto/engine/eng_openssl.c',
'openssl/crypto/engine/eng_pkey.c',
'openssl/crypto/engine/eng_rdrand.c',

'openssl/crypto/engine/eng_table.c',
'openssl/crypto/engine/tb_asnmth.c',
'openssl/crypto/engine/tb_cipher.c',
'openssl/crypto/engine/tb_dh.c',
'openssl/crypto/engine/tb_digest.c',
'openssl/crypto/engine/tb_dsa.c',
'openssl/crypto/engine/tb_eckey.c',
'openssl/crypto/engine/tb_pkmeth.c',
'openssl/crypto/engine/tb_rand.c',
'openssl/crypto/engine/tb_rsa.c',
'openssl/crypto/err/err.c',
'openssl/crypto/err/err_all.c',
'openssl/crypto/err/err_all_legacy.c',
'openssl/crypto/err/err_blocks.c',
'openssl/crypto/err/err_prn.c',
'openssl/crypto/ess/ess_asn1.c',
'openssl/crypto/ess/ess_err.c',
'openssl/crypto/ess/ess_lib.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/bio_b64.c',
'openssl/crypto/evp/bio_enc.c',
'openssl/crypto/evp/bio_md.c',
'openssl/crypto/evp/bio_ok.c',
'openssl/crypto/evp/c_allc.c',
'openssl/crypto/evp/c_alld.c',
'openssl/crypto/evp/cmeth_lib.c',
'openssl/crypto/evp/ctrl_params_translate.c',
'openssl/crypto/evp/dh_ctrl.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/dsa_ctrl.c',
'openssl/crypto/evp/e_aes.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha1.c',
'openssl/crypto/evp/e_aes_cbc_hmac_sha256.c',
'openssl/crypto/evp/e_aria.c',
'openssl/crypto/evp/e_bf.c',
'openssl/crypto/evp/e_camellia.c',
'openssl/crypto/evp/e_cast.c',
'openssl/crypto/evp/e_chacha20_poly1305.c',
'openssl/crypto/evp/e_des.c',
'openssl/crypto/evp/e_des3.c',
'openssl/crypto/evp/e_idea.c',
'openssl/crypto/evp/e_null.c',
'openssl/crypto/evp/e_old.c',
'openssl/crypto/evp/e_rc2.c',
'openssl/crypto/evp/e_rc4.c',
'openssl/crypto/evp/e_rc4_hmac_md5.c',
'openssl/crypto/evp/e_rc5.c',

'openssl/crypto/evp/e_seed.c',
'openssl/crypto/evp/e_sm4.c',
'openssl/crypto/evp/e_xcbc_d.c',
'openssl/crypto/evp/ec_ctrl.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/encode.c',
'openssl/crypto/evp/evp_cnf.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_err.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_key.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_pbe.c',
'openssl/crypto/evp/evp_pkey.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/legacy_blake2.c',
'openssl/crypto/evp/legacy_md4.c',
'openssl/crypto/evp/legacy_md5.c',
'openssl/crypto/evp/legacy_md5_sha1.c',
'openssl/crypto/evp/legacy_mdc2.c',
'openssl/crypto/evp/legacy_ripemd.c',
'openssl/crypto/evp/legacy_sha.c',
'openssl/crypto/evp/legacy_wp.c',
'openssl/crypto/evp/m_null.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/names.c',
'openssl/crypto/evp/p5_crpt.c',
'openssl/crypto/evp/p5_crpt2.c',
'openssl/crypto/evp/p_dec.c',
'openssl/crypto/evp/p_enc.c',
'openssl/crypto/evp/p_legacy.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/p_open.c',
'openssl/crypto/evp/p_seal.c',
'openssl/crypto/evp/p_sign.c',
'openssl/crypto/evp/p_verify.c',
'openssl/crypto/evp/pbe_scrypt.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',

'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/http/http_client.c',
'openssl/crypto/http/http_err.c',
'openssl/crypto/http/http_lib.c',
'openssl/crypto/idea/i_cbc.c',
'openssl/crypto/idea/i_cfb64.c',
'openssl/crypto/idea/i_ecb.c',
'openssl/crypto/idea/i_ofb64.c',
'openssl/crypto/idea/i_skey.c',
'openssl/crypto/kdf/kdf_err.c',
'openssl/crypto/lhash/lh_stats.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpt_err.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/cversion.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ebcdic.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/getenv.c',
'openssl/crypto/info.c',
'openssl/crypto/init.c',
'openssl/crypto/initthread.c',
'openssl/crypto/mem.c',
'openssl/crypto/mem_sec.c',
'openssl/crypto/o_dir.c',
'openssl/crypto/o_fopen.c',
'openssl/crypto/o_init.c',
'openssl/crypto/o_str.c',
'openssl/crypto/o_time.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',

'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/passphrase.c',
'openssl/crypto/provider.c',
'openssl/crypto/provider_child.c',
'openssl/crypto/provider_conf.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/punycode.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/trace.c',
'openssl/crypto/uid.c',
'openssl/crypto/md4/md4_dgst.c',
'openssl/crypto/md4/md4_one.c',
'openssl/crypto/md5/md5_dgst.c',
'openssl/crypto/md5/md5_one.c',
'openssl/crypto/md5/md5_sha1.c',
'openssl/crypto/mdc2/mdc2_one.c',
'openssl/crypto/mdc2/mdc2dgst.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/cts128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ocb128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/siv128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/objects/o_names.c',
'openssl/crypto/objects/obj_dat.c',
'openssl/crypto/objects/obj_err.c',
'openssl/crypto/objects/obj_lib.c',
'openssl/crypto/objects/obj_xref.c',
'openssl/crypto/ocsp/ocsp_asn.c',
'openssl/crypto/ocsp/ocsp_cl.c',
'openssl/crypto/ocsp/ocsp_err.c',
'openssl/crypto/ocsp/ocsp_ext.c',
'openssl/crypto/ocsp/ocsp_http.c',
'openssl/crypto/ocsp/ocsp_lib.c',

'openssl/crypto/ocsp/ocsp_prn.c',
'openssl/crypto/ocsp/ocsp_srv.c',
'openssl/crypto/ocsp/ocsp_vfy.c',
'openssl/crypto/ocsp/v3_ocsp.c',
'openssl/crypto/pem/pem_all.c',
'openssl/crypto/pem/pem_err.c',
'openssl/crypto/pem/pem_info.c',
'openssl/crypto/pem/pem_lib.c',
'openssl/crypto/pem/pem_oth.c',
'openssl/crypto/pem/pem_pk8.c',
'openssl/crypto/pem/pem_pkey.c',
'openssl/crypto/pem/pem_sign.c',
'openssl/crypto/pem/pem_x509.c',
'openssl/crypto/pem/pem_xaux.c',
'openssl/crypto/pem/pvkfmt.c',
'openssl/crypto/pkcs12/p12_add.c',
'openssl/crypto/pkcs12/p12_asn.c',
'openssl/crypto/pkcs12/p12_attr.c',
'openssl/crypto/pkcs12/p12_crpt.c',
'openssl/crypto/pkcs12/p12_crt.c',
'openssl/crypto/pkcs12/p12_decr.c',
'openssl/crypto/pkcs12/p12_init.c',
'openssl/crypto/pkcs12/p12_key.c',
'openssl/crypto/pkcs12/p12_kiss.c',
'openssl/crypto/pkcs12/p12_mutl.c',
'openssl/crypto/pkcs12/p12_npas.c',
'openssl/crypto/pkcs12/p12_p8d.c',
'openssl/crypto/pkcs12/p12_p8e.c',
'openssl/crypto/pkcs12/p12_sbag.c',
'openssl/crypto/pkcs12/p12_utl.c',
'openssl/crypto/pkcs12/pk12err.c',
'openssl/crypto/pkcs7/bio_pk7.c',
'openssl/crypto/pkcs7/pk7_asn1.c',
'openssl/crypto/pkcs7/pk7_attr.c',
'openssl/crypto/pkcs7/pk7_doit.c',
'openssl/crypto/pkcs7/pk7_lib.c',
'openssl/crypto/pkcs7/pk7_mime.c',
'openssl/crypto/pkcs7/pk7_smime.c',
'openssl/crypto/pkcs7/pkcs7err.c',
'openssl/crypto/poly1305/poly1305.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_err.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/prov_seed.c',
'openssl/crypto/rand/rand_deprecated.c',

'openssl/crypto/rand/rand_err.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rand/rand_meth.c',
'openssl/crypto/rand/rand_pool.c',
'openssl/crypto/rand/randfile.c',
'openssl/crypto/rc2/rc2_cbc.c',
'openssl/crypto/rc2/rc2_ecb.c',
'openssl/crypto/rc2/rc2_skey.c',
'openssl/crypto/rc2/rc2cfb64.c',
'openssl/crypto/rc2/rc2ofb64.c',
'openssl/crypto/ripemd/rmd_dgst.c',
'openssl/crypto/ripemd/rmd_one.c',
'openssl/crypto/rsa/rsa_ameth.c',
'openssl/crypto/rsa/rsa_asn1.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_depr.c',
'openssl/crypto/rsa/rsa_err.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_meth.c',
'openssl/crypto/rsa/rsa_mp.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pmeth.c',
'openssl/crypto/rsa/rsa_prn.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_saos.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/rsa/rsa_x931g.c',
'openssl/crypto/seed/seed.c',
'openssl/crypto/seed/seed_cbc.c',
'openssl/crypto/seed/seed_cfb.c',
'openssl/crypto/seed/seed_ecb.c',
'openssl/crypto/seed/seed_ofb.c',
'openssl/crypto/sha/sha1_one.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',

'openssl/crypto/siphash/siphash.c',
'openssl/crypto/sm2/sm2_crypt.c',
'openssl/crypto/sm2/sm2_err.c',
'openssl/crypto/sm2/sm2_key.c',
'openssl/crypto/sm2/sm2_sign.c',
'openssl/crypto/sm3/legacy_sm3.c',
'openssl/crypto/sm3/sm3.c',
'openssl/crypto/sm4/sm4.c',
'openssl/crypto/srp/srp_lib.c',
'openssl/crypto/srp/srp_vfy.c',
'openssl/crypto/stack/stack.c',
'openssl/crypto/store/store_err.c',
'openssl/crypto/store/store_init.c',
'openssl/crypto/store/store_lib.c',
'openssl/crypto/store/store_meth.c',
'openssl/crypto/store/store_register.c',
'openssl/crypto/store/store_result.c',
'openssl/crypto/store/store_strings.c',
'openssl/crypto/ts/ts_asn1.c',
'openssl/crypto/ts/ts_conf.c',
'openssl/crypto/ts/ts_err.c',
'openssl/crypto/ts/ts_lib.c',
'openssl/crypto/ts/ts_req_print.c',
'openssl/crypto/ts/ts_req_utils.c',
'openssl/crypto/ts/ts_rsp_print.c',
'openssl/crypto/ts/ts_rsp_sign.c',
'openssl/crypto/ts/ts_rsp_utils.c',
'openssl/crypto/ts/ts_rsp_verify.c',
'openssl/crypto/ts/ts_verify_ctx.c',
'openssl/crypto/txt_db/txt_db.c',
'openssl/crypto/ui/ui_err.c',
'openssl/crypto/ui/ui_lib.c',
'openssl/crypto/ui/ui_null.c',
'openssl/crypto/ui/ui_openssl.c',
'openssl/crypto/ui/ui_util.c',
'openssl/crypto/whrlpool/wp_dgst.c',
'openssl/crypto/x509/by_dir.c',
'openssl/crypto/x509/by_file.c',
'openssl/crypto/x509/by_store.c',
'openssl/crypto/x509/pcy_cache.c',
'openssl/crypto/x509/pcy_data.c',
'openssl/crypto/x509/pcy_lib.c',
'openssl/crypto/x509/pcy_map.c',
'openssl/crypto/x509/pcy_node.c',
'openssl/crypto/x509/pcy_tree.c',
'openssl/crypto/x509/t_crl.c',
'openssl/crypto/x509/t_req.c',
'openssl/crypto/x509/t_x509.c',

'openssl/crypto/x509/v3_addr.c',
'openssl/crypto/x509/v3_admis.c',
'openssl/crypto/x509/v3_akeya.c',
'openssl/crypto/x509/v3_akid.c',
'openssl/crypto/x509/v3_asid.c',
'openssl/crypto/x509/v3_bcons.c',
'openssl/crypto/x509/v3_bitst.c',
'openssl/crypto/x509/v3_conf.c',
'openssl/crypto/x509/v3_cpols.c',
'openssl/crypto/x509/v3_crld.c',
'openssl/crypto/x509/v3_enum.c',
'openssl/crypto/x509/v3_extku.c',
'openssl/crypto/x509/v3_genn.c',
'openssl/crypto/x509/v3_ia5.c',
'openssl/crypto/x509/v3_info.c',
'openssl/crypto/x509/v3_int.c',
'openssl/crypto/x509/v3_ist.c',
'openssl/crypto/x509/v3_lib.c',
'openssl/crypto/x509/v3_ncons.c',
'openssl/crypto/x509/v3_pci.c',
'openssl/crypto/x509/v3_pcia.c',
'openssl/crypto/x509/v3_pcons.c',
'openssl/crypto/x509/v3_pku.c',
'openssl/crypto/x509/v3_pmaps.c',
'openssl/crypto/x509/v3_prn.c',
'openssl/crypto/x509/v3_purp.c',
'openssl/crypto/x509/v3_san.c',
'openssl/crypto/x509/v3_skid.c',
'openssl/crypto/x509/v3_sxnet.c',
'openssl/crypto/x509/v3_tlsf.c',
'openssl/crypto/x509/v3_utf8.c',
'openssl/crypto/x509/v3_utl.c',
'openssl/crypto/x509/v3err.c',
'openssl/crypto/x509/x509_att.c',
'openssl/crypto/x509/x509_cmp.c',
'openssl/crypto/x509/x509_d2.c',
'openssl/crypto/x509/x509_def.c',
'openssl/crypto/x509/x509_err.c',
'openssl/crypto/x509/x509_ext.c',
'openssl/crypto/x509/x509_lu.c',
'openssl/crypto/x509/x509_meth.c',
'openssl/crypto/x509/x509_obj.c',
'openssl/crypto/x509/x509_r2x.c',
'openssl/crypto/x509/x509_req.c',
'openssl/crypto/x509/x509_set.c',
'openssl/crypto/x509/x509_trust.c',
'openssl/crypto/x509/x509_txt.c',
'openssl/crypto/x509/x509_v3.c',

'openssl/crypto/x509/x509_vfy.c',
'openssl/crypto/x509/x509_vpm.c',
'openssl/crypto/x509/x509cset.c',
'openssl/crypto/x509/x509name.c',
'openssl/crypto/x509/x509rset.c',
'openssl/crypto/x509/x509spki.c',
'openssl/crypto/x509/x509type.c',
'openssl/crypto/x509/x_all.c',
'openssl/crypto/x509/x_attrib.c',
'openssl/crypto/x509/x_crl.c',
'openssl/crypto/x509/x_exten.c',
'openssl/crypto/x509/x_name.c',
'openssl/crypto/x509/x_pubkey.c',
'openssl/crypto/x509/x_req.c',
'openssl/crypto/x509/x_x509.c',
'openssl/crypto/x509/x_x509a.c',
'openssl/engines/e_capi.c',
'openssl/engines/e_devcrypto.c',
'openssl/engines/e_padlock.c',
'openssl/providers/baseprov.c',
'openssl/providers/defltprov.c',
'openssl/providers/nullprov.c',
'openssl/providers/prov_running.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/der/der_sm2_key.c',
'openssl/providers/common/der/der_sm2_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_default.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/asymciphers/sm2_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv.c',
'openssl/providers/implementations/ciphers/cipher_aes_siv_hw.c',

'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aria_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aria_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aria_hw.c',
'openssl/providers/implementations/ciphers/cipher_camellia.c',
'openssl/providers/implementations/ciphers/cipher_camellia_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_hw.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305.c',
'openssl/providers/implementations/ciphers/cipher_chacha20_poly1305_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_null.c',
'openssl/providers/implementations/ciphers/cipher_sm4.c',
'openssl/providers/implementations/ciphers/cipher_sm4_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default.c',
'openssl/providers/implementations/ciphers/cipher_tdes_default_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap.c',
'openssl/providers/implementations/ciphers/cipher_tdes_wrap_hw.c',
'openssl/providers/implementations/digests/blake2_prov.c',
'openssl/providers/implementations/digests/blake2b_prov.c',

'openssl/providers/implementations/digests/blake2s_prov.c',
'openssl/providers/implementations/digests/md5_prov.c',
'openssl/providers/implementations/digests/md5_sha1_prov.c',
'openssl/providers/implementations/digests/null_prov.c',
'openssl/providers/implementations/digests/ripemd_prov.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/digests/sm3_prov.c',
'openssl/providers/implementations/encode_decode/decode_der2key.c',
'openssl/providers/implementations/encode_decode/decode_epki2pki.c',
'openssl/providers/implementations/encode_decode/decode_msblob2key.c',
'openssl/providers/implementations/encode_decode/decode_pem2der.c',
'openssl/providers/implementations/encode_decode/decode_pvk2key.c',
'openssl/providers/implementations/encode_decode/decode_spki2typespki.c',
'openssl/providers/implementations/encode_decode/encode_key2any.c',
'openssl/providers/implementations/encode_decode/encode_key2blob.c',
'openssl/providers/implementations/encode_decode/encode_key2ms.c',
'openssl/providers/implementations/encode_decode/encode_key2text.c',

'openssl/providers/implementations/encode_decode/endecoder_common.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/krb5kdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/pkcs12kdf.c',
'openssl/providers/implementations/kdfs/scrypt.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/blake2b_mac.c',
'openssl/providers/implementations/macs/blake2s_mac.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/macs/poly1305_prov.c',
'openssl/providers/implementations/macs/siphash_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/seed_src.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/rands/seeding/rand_cpu_x86.c',
'openssl/providers/implementations/rands/seeding/rand_tsc.c',
'openssl/providers/implementations/rands/seeding/rand_unix.c',
'openssl/providers/implementations/rands/seeding/rand_win.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',

```
  'openssl/providers/implementations/signature/sm2_sig.c',
  'openssl/providers/implementations/storemgmt/file_store.c',
  'openssl/providers/implementations/storemgmt/file_store_any2obj.c',
  'openssl/ssl/s3_cbc.c',
  'openssl/providers/common/der/der_dsa_key.c',
  'openssl/providers/common/der/der_dsa_sig.c',
  'openssl/providers/common/der/der_ec_key.c',
  'openssl/providers/common/der/der_ec_sig.c',
  'openssl/providers/common/der/der_ecx_key.c',
  'openssl/providers/common/der/der_rsa_key.c',
  'openssl/providers/common/provider_ctx.c',
  'openssl/providers/common/provider_err.c',
  'openssl/providers/implementations/ciphers/ciphercommon.c',
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
   'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish.c',
  'openssl/providers/implementations/ciphers/cipher_blowfish_hw.c',
  'openssl/providers/implementations/ciphers/cipher_cast5.c',
  'openssl/providers/implementations/ciphers/cipher_cast5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_des.c',
  'openssl/providers/implementations/ciphers/cipher_des_hw.c',
  'openssl/providers/implementations/ciphers/cipher_desx.c',
  'openssl/providers/implementations/ciphers/cipher_desx_hw.c',
   'openssl/providers/implementations/ciphers/cipher_idea.c',
  'openssl/providers/implementations/ciphers/cipher_idea_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc2.c',
  'openssl/providers/implementations/ciphers/cipher_rc2_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hmac_md5_hw.c',
  'openssl/providers/implementations/ciphers/cipher_rc4_hw.c',
  'openssl/providers/implementations/ciphers/cipher_seed.c',
  'openssl/providers/implementations/ciphers/cipher_seed_hw.c',
  'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
  'openssl/providers/implementations/digests/md4_prov.c',
  'openssl/providers/implementations/digests/mdc2_prov.c',
  'openssl/providers/implementations/digests/ripemd_prov.c',
  'openssl/providers/implementations/digests/wp_prov.c',
   'openssl/providers/implementations/kdfs/pbkdf1.c',
  'openssl/providers/prov_running.c',
  'openssl/providers/legacyprov.c',
],
```

```
'openssl_sources_BSD-x86_64': [
  './config/archs/BSD-x86_64/asm/crypto/aes/aes-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/aesni-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/aesni-sha1-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/aesni-sha256-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/aesni-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/bsaes-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/aes/vpaes-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/rsaz-avx2.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/rsaz-avx512.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/rsaz-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/x86_64-gf2m.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/x86_64-mont.s',
  './config/archs/BSD-x86_64/asm/crypto/bn/x86_64-mont5.s',
   './config/archs/BSD-x86_64/asm/crypto/camellia/cmll-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/chacha/chacha-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/ec/ecp_nistz256-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/ec/x25519-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/x86_64cpuid.s',
  './config/archs/BSD-x86_64/asm/crypto/md5/md5-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/modes/aesni-gcm-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/modes/ghash-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/poly1305/poly1305-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/rc4/rc4-md5-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/rc4/rc4-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/keccak1600-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha1-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha1-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha256-mb-x86_64.s',
   './config/archs/BSD-x86_64/asm/crypto/sha/sha256-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/sha/sha512-x86_64.s',
  './config/archs/BSD-x86_64/asm/crypto/whrlpool/wp-x86_64.s',
  './config/archs/BSD-x86_64/asm/engines/e_padlock-x86_64.s',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86_64/asm/providers/common/der/der_wrap_gen.c',
  './config/archs/BSD-x86_64/asm/providers/legacy.ld',
  './config/archs/BSD-x86_64/asm/providers/fips.ld',
],
'openssl_defines_BSD-x86_64': [

  'NDEBUG',
  'L_ENDIAN',
  'OPENSSL_BUILDING_OPENSSL',
```

```
    'AES_ASM',
    'BSAES_ASM',
    'CMLL_ASM',
    'ECP_NISTZ256_ASM',
    'GHASH_ASM',
    'KECCAK1600_ASM',
    'MD5_ASM',
    'OPENSSL_BN_ASM_GF2m',
    'OPENSSL_BN_ASM_MONT',
    'OPENSSL_BN_ASM_MONT5',
    'OPENSSL_CPUID_OBJ',
    'OPENSSL_IA32_SSE2',
    'PADLOCK_ASM',
    'POLY1305_ASM',
    'RC4_ASM',
    'SHA1_ASM',
    'SHA256_ASM',
    'SHA512_ASM',
    'VPAES_ASM',
    'WHIRLPOOL_ASM',
    'X25519_ASM',
    'OPENSSL_PIC',
  ],
  'openssl_cflags_BSD-x86_64': [
    '-Wa,--noexecstack',
    '-Wall -O3',
    '-pthread',
    '-Wall -O3',
  ],
  'openssl_ex_libs_BSD-x86_64': [
    '-pthread',
  ],
},
'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
],
'defines': ['<@(openssl_defines_BSD-x86_64)'],
'cflags' : ['<@(openssl_cflags_BSD-x86_64)'],
'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],
 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86_64)'],
'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86_64)'],
},
```

}
MIT License

Copyright (c) Kevin Mrtensson <kevinmartensson@gmail.com> (github.com/kevva)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Apache License
Version 2.0, January 2004
https://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,

including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of

this
License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
(except as stated in this section) patent license to make, have made,
use, offer to sell, sell, import, and otherwise transfer the Work,
where such license applies only to those patent claims licensable
by such Contributor that are necessarily infringed by their
Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside

or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

[
"0BSD",
"3D-Slicer-1.0",
"AAL",
"ADSL",
"AFL-1.1",
"AFL-1.2",
"AFL-2.0",
"AFL-2.1",
"AFL-3.0",
"AGPL-1.0-only",
"AGPL-1.0-or-later",
"AGPL-3.0-only",
"AGPL-3.0-or-later",
"AMD-newlib",
"AMDPLPA",
"AML",
"AML-glslang",
"AMPAS",
"ANTLR-PD",
"ANTLR-PD-fallback",
"APAFML",
"APL-1.0",
"APSL-1.0",
"APSL-1.1",
"APSL-1.2",
"APSL-2.0",
"ASWF-Digital-Assets-1.0",
"ASWF-Digital-Assets-1.1",
"Abstyles",
"AdaCore-doc",
"Adobe-2006",
"Adobe-Display-PostScript",
"Adobe-Glyph",
"Adobe-Utopia",

"Afmparse",
"Aladdin",
"Apache-1.0",
"Apache-1.1",
"Apache-2.0",
"App-s2p",
"Arphic-1999",
"Artistic-1.0",
"Artistic-1.0-Perl",
"Artistic-1.0-cl8",
"Artistic-2.0",
"BSD-1-Clause",
"BSD-2-Clause",
"BSD-2-Clause-Darwin",
"BSD-2-Clause-Patent",
"BSD-2-Clause-Views",
"BSD-2-Clause-first-lines",
"BSD-3-Clause",
"BSD-3-Clause-Attribution",
"BSD-3-Clause-Clear",
"BSD-3-Clause-HP",
"BSD-3-Clause-LBNL",
"BSD-3-Clause-Modification",
"BSD-3-Clause-No-Military-License",
"BSD-3-Clause-No-Nuclear-License",
"BSD-3-Clause-No-Nuclear-License-2014",
"BSD-3-Clause-No-Nuclear-Warranty",
"BSD-3-Clause-Open-MPI",
"BSD-3-Clause-Sun",
"BSD-3-Clause-acpica",
"BSD-3-Clause-flex",
"BSD-4-Clause",
"BSD-4-Clause-Shortened",
"BSD-4-Clause-UC",
"BSD-4.3RENO",
"BSD-4.3TAHOE",
"BSD-Advertising-Acknowledgement",
"BSD-Attribution-HPND-disclaimer",
"BSD-Inferno-Nettverk",
"BSD-Protection",
"BSD-Source-Code",
"BSD-Source-beginning-file",
"BSD-Systemics",
"BSD-Systemics-W3Works",
"BSL-1.0",
"BUSL-1.1",
"Baekmuk",
"Bahyph",

"Barr",
"Beerware",
"BitTorrent-1.0",
"BitTorrent-1.1",
"Bitstream-Charter",
"Bitstream-Vera",
"BlueOak-1.0.0",
"Boehm-GC",
"Borceux",
"Brian-Gladman-2-Clause",
"Brian-Gladman-3-Clause",
"C-UDA-1.0",
"CAL-1.0",
"CAL-1.0-Combined-Work-Exception",
"CATOSL-1.1",
"CC-BY-1.0",
"CC-BY-2.0",
"CC-BY-2.5",
"CC-BY-2.5-AU",
"CC-BY-3.0",
"CC-BY-3.0-AT",
"CC-BY-3.0-AU",
"CC-BY-3.0-DE",
"CC-BY-3.0-IGO",
"CC-BY-3.0-NL",
"CC-BY-3.0-US",
"CC-BY-4.0",
"CC-BY-NC-1.0",
"CC-BY-NC-2.0",
"CC-BY-NC-2.5",
"CC-BY-NC-3.0",
"CC-BY-NC-3.0-DE",
"CC-BY-NC-4.0",
"CC-BY-NC-ND-1.0",
"CC-BY-NC-ND-2.0",
"CC-BY-NC-ND-2.5",
"CC-BY-NC-ND-3.0",
"CC-BY-NC-ND-3.0-DE",
"CC-BY-NC-ND-3.0-IGO",
"CC-BY-NC-ND-4.0",
"CC-BY-NC-SA-1.0",
"CC-BY-NC-SA-2.0",
"CC-BY-NC-SA-2.0-DE",
"CC-BY-NC-SA-2.0-FR",
"CC-BY-NC-SA-2.0-UK",
"CC-BY-NC-SA-2.5",
"CC-BY-NC-SA-3.0",
"CC-BY-NC-SA-3.0-DE",

"CC-BY-NC-SA-3.0-IGO",
"CC-BY-NC-SA-4.0",
"CC-BY-ND-1.0",
"CC-BY-ND-2.0",
"CC-BY-ND-2.5",
"CC-BY-ND-3.0",
"CC-BY-ND-3.0-DE",
"CC-BY-ND-4.0",
"CC-BY-SA-1.0",
"CC-BY-SA-2.0",
"CC-BY-SA-2.0-UK",
"CC-BY-SA-2.1-JP",
"CC-BY-SA-2.5",
"CC-BY-SA-3.0",
"CC-BY-SA-3.0-AT",
"CC-BY-SA-3.0-DE",
"CC-BY-SA-3.0-IGO",
"CC-BY-SA-4.0",
"CC-PDDC",
"CC0-1.0",
"CDDL-1.0",
"CDDL-1.1",
"CDL-1.0",
"CDLA-Permissive-1.0",
"CDLA-Permissive-2.0",
"CDLA-Sharing-1.0",
"CECILL-1.0",
"CECILL-1.1",
"CECILL-2.0",
"CECILL-2.1",
"CECILL-B",
"CECILL-C",
"CERN-OHL-1.1",
"CERN-OHL-1.2",
"CERN-OHL-P-2.0",
"CERN-OHL-S-2.0",
"CERN-OHL-W-2.0",
"CFITSIO",
"CMU-Mach",
"CMU-Mach-nodoc",
"CNRI-Jython",
"CNRI-Python",
"CNRI-Python-GPL-Compatible",
"COIL-1.0",
"CPAL-1.0",
"CPL-1.0",
"CPOL-1.02",
"CUA-OPL-1.0",

"Caldera",
"Caldera-no-preamble",
"Catharon",
"ClArtistic",
"Clips",
"Community-Spec-1.0",
"Condor-1.1",
"Cornell-Lossless-JPEG",
"Cronyx",
"Crossword",
"CrystalStacker",
"Cube",
"D-FSL-1.0",
"DEC-3-Clause",
"DL-DE-BY-2.0",
"DL-DE-ZERO-2.0",
"DOC",
"DRL-1.0",
"DRL-1.1",
"DSDP",
"DocBook-Schema",
"DocBook-XML",
"Dotseqn",
"ECL-1.0",
"ECL-2.0",
"EFL-1.0",
"EFL-2.0",
"EPICS",
"EPL-1.0",
"EPL-2.0",
"EUDatagrid",
"EUPL-1.0",
"EUPL-1.1",
"EUPL-1.2",
"Elastic-2.0",
"Entessa",
"ErlPL-1.1",
"Eurosym",
"FBM",
"FDK-AAC",
"FSFAP",
"FSFAP-no-warranty-disclaimer",
"FSFUL",
"FSFULLR",
"FSFULLRWD",
"FTL",
"Fair",
"Ferguson-Twofish",

"Frameworx-1.0",
"FreeBSD-DOC",
"FreeImage",
"Furuseth",
"GCR-docs",
"GD",
"GFDL-1.1-invariants-only",
"GFDL-1.1-invariants-or-later",
"GFDL-1.1-no-invariants-only",
"GFDL-1.1-no-invariants-or-later",
"GFDL-1.1-only",
"GFDL-1.1-or-later",
"GFDL-1.2-invariants-only",
"GFDL-1.2-invariants-or-later",
"GFDL-1.2-no-invariants-only",
"GFDL-1.2-no-invariants-or-later",
"GFDL-1.2-only",
"GFDL-1.2-or-later",
"GFDL-1.3-invariants-only",
"GFDL-1.3-invariants-or-later",
"GFDL-1.3-no-invariants-only",
"GFDL-1.3-no-invariants-or-later",
"GFDL-1.3-only",
"GFDL-1.3-or-later",
"GL2PS",
"GLWTPL",
"GPL-1.0-only",
"GPL-1.0-or-later",
"GPL-2.0-only",
"GPL-2.0-or-later",
"GPL-3.0-only",
"GPL-3.0-or-later",
"Giftware",
"Glide",
"Glulxe",
"Graphics-Gems",
"Gutmann",
"HIDAPI",
"HP-1986",
"HP-1989",
"HPND",
"HPND-DEC",
"HPND-Fenneberg-Livingston",
"HPND-INRIA-IMAG",
"HPND-Intel",
"HPND-Kevlin-Henney",
"HPND-MIT-disclaimer",
"HPND-Markus-Kuhn",

"HPND-Netrek",
"HPND-Pbmplus",
"HPND-UC",
"HPND-UC-export-US",
"HPND-doc",
"HPND-doc-sell",
"HPND-export-US",
"HPND-export-US-acknowledgement",
"HPND-export-US-modify",
"HPND-export2-US",
"HPND-merchantability-variant",
"HPND-sell-MIT-disclaimer-xserver",
"HPND-sell-regexpr",
"HPND-sell-variant",
"HPND-sell-variant-MIT-disclaimer",
"HPND-sell-variant-MIT-disclaimer-rev",
"HTMLTIDY",
"HaskellReport",
"Hippocratic-2.1",
"IBM-pibs",
"ICU",
"IEC-Code-Components-EULA",
"IJG",
"IJG-short",
"IPA",
"IPL-1.0",
"ISC",
"ISC-Veillard",
"ImageMagick",
"Imlib2",
"Info-ZIP",
"Inner-Net-2.0",
"Intel",
"Intel-ACPI",
"Interbase-1.0",
"JPL-image",
"JPNIC",
"JSON",
"Jam",
"JasPer-2.0",
"Kastrup",
"Kazlib",
"Knuth-CTAN",
"LAL-1.2",
"LAL-1.3",
"LGPL-2.0-only",
"LGPL-2.0-or-later",
"LGPL-2.1-only",

"LGPL-2.1-or-later",
"LGPL-3.0-only",
"LGPL-3.0-or-later",
"LGPLLR",
"LOOP",
"LPD-document",
"LPL-1.0",
"LPL-1.02",
"LPPL-1.0",
"LPPL-1.1",
"LPPL-1.2",
"LPPL-1.3a",
"LPPL-1.3c",
"LZMA-SDK-9.11-to-9.20",
"LZMA-SDK-9.22",
"Latex2e",
"Latex2e-translated-notice",
"Leptonica",
"LiLiQ-P-1.1",
"LiLiQ-R-1.1",
"LiLiQ-Rplus-1.1",
"Libpng",
"Linux-OpenIB",
"Linux-man-pages-1-para",
"Linux-man-pages-copyleft",
"Linux-man-pages-copyleft-2-para",
"Linux-man-pages-copyleft-var",
"Lucida-Bitmap-Fonts",
"MIT",
"MIT-0",
"MIT-CMU",
"MIT-Festival",
"MIT-Khronos-old",
"MIT-Modern-Variant",
"MIT-Wu",
"MIT-advertising",
"MIT-enna",
"MIT-feh",
"MIT-open-group",
"MIT-testregex",
"MITNFA",
"MMIXware",
"MPEG-SSG",
"MPL-1.0",
"MPL-1.1",
"MPL-2.0",
"MPL-2.0-no-copyleft-exception",
"MS-LPL",

"MS-PL",
"MS-RL",
"MTLL",
"Mackerras-3-Clause",
"Mackerras-3-Clause-acknowledgment",
"MakeIndex",
"Martin-Birgmeier",
"McPhee-slideshow",
"Minpack",
"MirOS",
"Motosoto",
"MulanPSL-1.0",
"MulanPSL-2.0",
"Multics",
"Mup",
"NAIST-2003",
"NASA-1.3",
"NBPL-1.0",
"NCBI-PD",
"NCGL-UK-2.0",
"NCL",
"NCSA",
"NGPL",
"NICTA-1.0",
"NIST-PD",
"NIST-PD-fallback",
"NIST-Software",
"NLOD-1.0",
"NLOD-2.0",
"NLPL",
"NOSL",
"NPL-1.0",
"NPL-1.1",
"NPOSL-3.0",
"NRL",
"NTP",
"NTP-0",
"Naumen",
"NetCDF",
"Newsletr",
"Nokia",
"Noweb",
"O-UDA-1.0",
"OAR",
"OCCT-PL",
"OCLC-2.0",
"ODC-By-1.0",
"ODbL-1.0",

"OFFIS",
"OFL-1.0",
"OFL-1.0-RFN",
"OFL-1.0-no-RFN",
"OFL-1.1",
"OFL-1.1-RFN",
"OFL-1.1-no-RFN",
"OGC-1.0",
"OGDL-Taiwan-1.0",
"OGL-Canada-2.0",
"OGL-UK-1.0",
"OGL-UK-2.0",
"OGL-UK-3.0",
"OGTSL",
"OLDAP-1.1",
"OLDAP-1.2",
"OLDAP-1.3",
"OLDAP-1.4",
"OLDAP-2.0",
"OLDAP-2.0.1",
"OLDAP-2.1",
"OLDAP-2.2",
"OLDAP-2.2.1",
"OLDAP-2.2.2",
"OLDAP-2.3",
"OLDAP-2.4",
"OLDAP-2.5",
"OLDAP-2.6",
"OLDAP-2.7",
"OLDAP-2.8",
"OLFL-1.3",
"OML",
"OPL-1.0",
"OPL-UK-3.0",
"OPUBL-1.0",
"OSET-PL-2.1",
"OSL-1.0",
"OSL-1.1",
"OSL-2.0",
"OSL-2.1",
"OSL-3.0",
"OpenPBS-2.3",
"OpenSSL",
"OpenSSL-standalone",
"OpenVision",
"PADL",
"PDDL-1.0",
"PHP-3.0",

"PHP-3.01",
"PPL",
"PSF-2.0",
"Parity-6.0.0",
"Parity-7.0.0",
"Pixar",
"Plexus",
"PolyForm-Noncommercial-1.0.0",
"PolyForm-Small-Business-1.0.0",
"PostgreSQL",
"Python-2.0",
"Python-2.0.1",
"QPL-1.0",
"QPL-1.0-INRIA-2004",
"Qhull",
"RHeCos-1.1",
"RPL-1.1",
"RPL-1.5",
"RPSL-1.0",
"RSA-MD",
"RSCPL",
"Rdisc",
"Ruby",
"Ruby-pty",
"SAX-PD",
"SAX-PD-2.0",
"SCEA",
"SGI-B-1.0",
"SGI-B-1.1",
"SGI-B-2.0",
"SGI-OpenGL",
"SGP4",
"SHL-0.5",
"SHL-0.51",
"SISSL",
"SISSL-1.2",
"SL",
"SMLNJ",
"SMPPL",
"SNIA",
"SPL-1.0",
"SSH-OpenSSH",
"SSH-short",
"SSLeay-standalone",
"SSPL-1.0",
"SWL",
"Saxpath",
"SchemeReport",

"Sendmail",
"Sendmail-8.23",
"SimPL-2.0",
"Sleepycat",
"Soundex",
"Spencer-86",
"Spencer-94",
"Spencer-99",
"SugarCRM-1.1.3",
"Sun-PPP",
"Sun-PPP-2000",
"SunPro",
"Symlinks",
"TAPR-OHL-1.0",
"TCL",
"TCP-wrappers",
"TGPPL-1.0",
"TMate",
"TORQUE-1.1",
"TOSL",
"TPDL",
"TPL-1.0",
"TTWL",
"TTYP0",
"TU-Berlin-1.0",
"TU-Berlin-2.0",
"TermReadKey",
"UCAR",
"UCL-1.0",
"UMich-Merit",
"UPL-1.0",
"URT-RLE",
"Ubuntu-font-1.0",
"Unicode-3.0",
"Unicode-DFS-2015",
"Unicode-DFS-2016",
"Unicode-TOU",
"UnixCrypt",
"Unlicense",
"VOSTROM",
"VSL-1.0",
"Vim",
"W3C",
"W3C-19980720",
"W3C-20150513",
"WTFPL",
"Watcom-1.0",
"Widget-Workshop",

"Wsuipa",
"X11",
"X11-distribute-modifications-variant",
"X11-swapped",
"XFree86-1.1",
"XSkat",
"Xdebug-1.03",
"Xerox",
"Xfig",
"Xnet",
"YPL-1.0",
"YPL-1.1",
"ZPL-1.1",
"ZPL-2.0",
"ZPL-2.1",
"Zed",
"Zeeff",
"Zend-2.0",
"Zimbra-1.3",
"Zimbra-1.4",
"Zlib",
"any-OSI",
"bcrypt-Solar-Designer",
"blessing",
"bzip2-1.0.6",
"check-cvs",
"checkmk",
"copyleft-next-0.3.0",
"copyleft-next-0.3.1",
"curl",
"cve-tou",
"diffmark",
"dtoa",
"dvipdfm",
"eGenix",
"etalab-2.0",
"fwlw",
"gSOAP-1.3b",
"gnuplot",
"gtkbook",
"hdparm",
"iMatix",
"libpng-2.0",
"libselinux-1.0",
"libtiff",
"libutil-David-Nugent",
"lsof",
"magaz",

"mailprio",
"metamail",
"mpi-permissive",
"mpich2",
"mplus",
"pkgconf",
"pnmstitch",
"psfrag",
"psutils",
"python-ldap",
"radvd",
"snprintf",
"softSurfer",
"ssh-keyscan",
"swrule",
"threeparttable",
"ulem",
"w3m",
"xinetd",
"xkeyboard-config-Zinoviev",
"xlock",
"xpp",
"xzoom",
"zlib-acknowledgement"
]
UNICODE LICENSE V3

COPYRIGHT AND PERMISSION NOTICE

Copyright 2016-2024 Unicode, Inc.

NOTICE TO USER: Carefully read the following legal agreement. BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING DATA FILES, AND/OR SOFTWARE, YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.

Permission is hereby granted, free of charge, to any person obtaining a copy of data files and any associated documentation (the "Data Files") or software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that either (a) this copyright and permission notice appear with all copies of the Data Files or Software, or (b) this copyright and permission notice appear in associated Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall
not be used in advertising or otherwise to promote the sale, use or other
dealings in these Data Files or Software without prior written
authorization of the copyright holder.

SPDX-License-Identifier:
Unicode-3.0

Third-Party Software Licenses

This section contains third-party software notices and/or additional
terms for licensed third-party software components included within ICU
libraries.

ICU License - ICU 1.8.1 to ICU 57.1

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others
All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, and/or sell copies of the Software, and to permit persons
to whom the Software is furnished to do so, provided that the above
copyright notice(s) and this permission notice appear in all copies
of
the Software and that both the above copyright notice(s) and this
permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

All trademarks and registered trademarks mentioned herein are the property of their respective owners.

Chinese/Japanese Word Break Dictionary Data (cjdict.txt)

The Google Chrome software developed by Google is licensed under
the BSD license. Other software included in this distribution is
provided under other licenses, as set forth below.
#
The BSD License
http://opensource.org/licenses/bsd-license.php
Copyright (C) 2006-2008, Google Inc.
#
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:
#
Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.
Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided with
the distribution.
Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.
#

```
#
#  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
# CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
# INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
# MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
# DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
# LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
# CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
# SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
# BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
# LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
# NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
# SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
 OF SUCH DAMAGE.
#
#
#  The word list in cjdict.txt are generated by combining three word lists
# listed below with further processing for compound word breaking. The
# frequency is generated with an iterative training against Google web
# corpora.
#
#  * Libtabe (Chinese)
#    - https://sourceforge.net/project/?group_id=1519
#    - Its license terms and conditions are shown below.
#
#  * IPADIC (Japanese)
#    - http://chasen.aist-nara.ac.jp/chasen/distribution.html
#    - Its license terms and conditions are shown below.
#
#  ---------COPYING.libtabe ---- BEGIN--------------------
#
#  /*
#   * Copyright (c) 1999 TaBE Project.
#   * Copyright (c) 1999 Pai-Hsiang Hsiao.
#   * All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this
 list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the TaBE Project nor the names of its
```

```
#   *   contributors may be used to endorse or promote products derived
#   *   from this software without specific prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  /*
#   * Copyright (c) 1999 Computer Systems and Communication Lab,
#   *                    Institute of Information Science, Academia
#       *                  Sinica. All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following
 disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the Computer Systems and Communication Lab
#   *   nor the names of its contributors may be used to endorse or
#   *   promote products derived from this software without specific
#   *   prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
```

CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY OF SUCH DAMAGE.
*/
#
Copyright 1996 Chih-Hao Tsai @ Beckman Institute,
University of Illinois
c-tsai4@uiuc.edu http://casper.beckman.uiuc.edu/~c-tsai4
#
---------------COPYING.libtabe-----END--------------------------------
#
#
---------------COPYING.ipadic-----BEGIN-------------------------------
#
Copyright 2000, 2001, 2002, 2003 Nara Institute of Science
and Technology. All Rights Reserved.
#
Use, reproduction, and distribution of this software is permitted.
Any copy of this software, whether in its original form or modified,
must include both the above copyright notice and the following
paragraphs.
#
Nara Institute of Science and Technology (NAIST),
the copyright holders, disclaims all warranties with regard to this
software, including
 all implied warranties of merchantability and
fitness, in no event shall NAIST be liable for
any special, indirect or consequential damages or any damages
whatsoever resulting from loss of use, data or profits, whether in an
action of contract, negligence or other tortuous action, arising out
of or in connection with the use or performance of this software.
#
A large portion of the dictionary entries
originate from ICOT Free Software. The following conditions for ICOT
Free Software applies to the current dictionary as well.
#
Each User may also freely distribute the Program, whether in its
original form or modified, to any third party or parties, PROVIDED
that the provisions of Section 3 ("NO WARRANTY") will ALWAYS appear
on, or be attached to, the Program, which is distributed substantially
in the same form as set out herein and that such intended
distribution, if actually made, will neither violate or otherwise
contravene
 any of the laws and regulations of the countries having
jurisdiction over the User or the intended distribution itself.
#
NO WARRANTY

#
The program was produced on an experimental basis in the course of the
research and development conducted during the project and is provided
to users as so produced on an experimental basis. Accordingly, the
program is provided without any warranty whatsoever, whether express,
implied, statutory or otherwise. The term "warranty" used herein
includes, but is not limited to, any warranty of the quality,
performance, merchantability and fitness for a particular purpose of
the program and the nonexistence of any infringement or violation of
any right of any third party.
#
Each user of the program will agree and understand, and be deemed to
have agreed and understood, that there is no warranty whatsoever for
the program and, accordingly, the entire risk arising from or
otherwise connected
 with the program is assumed by the user.
#
Therefore, neither ICOT, the copyright holder, or any other
organization that participated in or was otherwise related to the
development of the program and their respective officials, directors,
officers and other employees shall be held liable for any and all
damages, including, without limitation, general, special, incidental
and consequential damages, arising out of or otherwise in connection
with the use or inability to use the program or any product, material
or result produced or otherwise obtained by using the program,
regardless of whether they have been advised of, or otherwise had
knowledge of, the possibility of such damages at any time during the
project or thereafter. Each user will be deemed to have agreed to the
foregoing by his or her commencement of use of the program. The term
"use" as used herein includes, but is not limited to, the use,
modification, copying and
 distribution of the program and the
production of secondary products from the program.
#
In the case where the program, whether in its original form or
modified, was distributed or delivered to or received by a user from
any person, organization or entity other than ICOT, unless it makes or
grants independently of ICOT any specific warranty to the user in
writing, such person, organization or entity, will also be exempted
from and not be held liable to the user for any such damages as noted
above as far as the program is concerned.
#
----------COPYING.ipadic-----END----------

Lao Word Break Dictionary Data (laodict.txt)

Copyright (C) 2016 and later: Unicode, Inc. and others.
License & terms of use: http://www.unicode.org/copyright.html
Copyright (c) 2015 International Business Machines Corporation
and others. All Rights Reserved.
#
#
Project: https://github.com/rober42539/lao-dictionary
Dictionary: https://github.com/rober42539/lao-dictionary/laodict.txt
License: https://github.com/rober42539/lao-dictionary/LICENSE.txt
(copied below)
#
This file is derived from the above dictionary version of Nov 22, 2020
--
Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:
#
Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer. Redistributions in binary
form must reproduce the above copyright notice, this list of conditions and
the following disclaimer in the documentation and/or other materials
provided with the distribution.
#
THIS SOFTWARE IS PROVIDED
BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
OF THE POSSIBILITY OF SUCH DAMAGE.
--

Burmese Word Break Dictionary Data (burmesedict.txt)

Copyright (c) 2014 International
Business Machines Corporation
and others. All Rights Reserved.
#

This list is part of a project hosted at:
github.com/kanyawtech/myanmar-karen-word-lists
#

Copyright (c) 2013, LeRoy Benjamin Sharon
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met: Redistributions of source code must retain the above
copyright notice, this list of conditions and the following
disclaimer. Redistributions in binary form must reproduce the
above copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
#
Neither the name Myanmar Karen Word Lists, nor the names of its
contributors may be used to endorse or promote products derived
from this software
 without specific prior written permission.
#
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED
TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF
THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

Time
 Zone Database

 ICU uses the public domain data and code derived from Time Zone
Database for its time zone support. The ownership of the TZ database
is explained in BCP 175: Procedure for Maintaining the Time Zone
Database section 7.

7. Database Ownership
#

The TZ database itself is not an IETF Contribution or an IETF
document. Rather it is a pre-existing and regularly updated work
that is in the public domain, and is intended to remain in the
public domain. Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do
not apply to the TZ Database or contributions that individuals make
to it. Should any claims be made and substantiated against the TZ
Database, the organization that is providing the IANA
Considerations defined in this RFC, under the memorandum of
understanding with the IETF, currently ICANN, may act in accordance
with all competent court orders. No ownership claims will be made
by ICANN or
the IETF Trust on the database or the code. Any person
making a contribution to the database or code waives all rights to
future claims in that contribution or in the TZ Database.

Google double-conversion

Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived

from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

JSON parsing library (nlohmann/json)

File: vendor/json/upstream/single_include/nlohmann/json.hpp (only for ICU4C)

MIT License

Copyright (c) 2013-2022 Niels Lohmann

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

File: aclocal.m4 (only for ICU4C)
Section: pkg.m4 - Macros to locate and utilise pkg-config.

Copyright 2004 Scott James Remnant <scott@netsplit.com>.
Copyright 2012-2015 Dan Nicholson <dbn.lists@gmail.com>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 59 Temple Place
 - Suite 330, Boston, MA
02111-1307, USA.

As a special exception to the GNU General Public License, if you
distribute this file as part of a program that contains a
configuration script generated by Autoconf, you may include it under
the same distribution terms that you use for the rest of that
program.

(The condition for the exception is fulfilled because
ICU4C includes a configuration script generated by Autoconf,
namely the `configure` script.)

File: config.guess (only for ICU4C)

This file is free software; you can redistribute it and/or modify it
under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General
 Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, see <https://www.gnu.org/licenses/>.

As a special exception to the GNU General Public License, if you
distribute this file as part of a program that contains a
configuration script generated by Autoconf, you may include it under
the same distribution terms that you use for the rest of that
program. This Exception is an additional permission under section 7
of the GNU General Public License, version 3 ("GPLv3").

(The condition for the exception is fulfilled because
ICU4C includes a configuration script generated by Autoconf,
namely the `configure` script.)

File: install-sh (only for ICU4C)

Copyright 1991 by the Massachusetts Institute of Technology

Permission to use, copy, modify, distribute, and sell this software and its
documentation for any purpose is hereby granted
 without fee, provided that
the above copyright notice appear in all copies and that both that
copyright notice and this permission notice appear in supporting
documentation, and that the name of M.I.T. not be used in advertising or
publicity pertaining to distribution of the software without specific,
written prior permission. M.I.T. makes no representations about the
suitability of this software for any purpose. It is provided "as is"
without express or implied warranty.
The MIT License

Copyright (c) 2012, 2014, 2015, 2016 Tatsuhiro Tsujikawa
Copyright (c) 2012, 2014, 2015, 2016 nghttp2 contributors

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
 WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
The MIT License

Copyright (c) 2015 Kyle E. Mitchell & other authors listed in AUTHORS

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including

without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE,
 ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
#ifndef SRC_PERMISSION_FS_PERMISSION_H_
#define SRC_PERMISSION_FS_PERMISSION_H_

#if defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS

#include "v8.h"

#include <unordered_map>
#include "permission/permission_base.h"
#include "util.h"

namespace node {

namespace permission {

class FSPermission final : public PermissionBase {
public:
 void Apply(Environment* env,
            const std::vector<std::string>& allow,
            PermissionScope scope) override;
 bool is_granted(Environment* env,
                 PermissionScope perm,
                 const std::string_view& param) const override;

 struct RadixTree {
   struct Node {
     std::string prefix;
     std::unordered_map<char, Node*> children;
     Node* wildcard_child;
     bool is_leaf;

     explicit Node(const std::string& pre)

```
      : prefix(pre), wildcard_child(nullptr), is_leaf(false) {}

  Node() : wildcard_child(nullptr), is_leaf(false) {}

  Node* CreateChild(const std::string& path_prefix)
{
    if (path_prefix.empty() && !is_leaf) {
      is_leaf = true;
      return this;
    }

    CHECK(!path_prefix.empty());
    char label = path_prefix[0];

    Node* child = children[label];
    if (child == nullptr) {
      children[label] = new Node(path_prefix);
      return children[label];
    }

    // swap prefix
    size_t i = 0;
    size_t prefix_len = path_prefix.length();
    for (; i < child->prefix.length(); ++i) {
      if (i > prefix_len || path_prefix[i] != child->prefix[i]) {
        std::string parent_prefix = child->prefix.substr(0, i);
        std::string child_prefix = child->prefix.substr(i);

        child->prefix = child_prefix;
        Node* split_child = new Node(parent_prefix);
        split_child->children[child_prefix[0]] = child;
        children[parent_prefix[0]] = split_child;

        return split_child->CreateChild(path_prefix.substr(i));
      }

  }
    child->is_leaf = true;
    return child->CreateChild(path_prefix.substr(i));
  }

  Node* CreateWildcardChild() {
    if (wildcard_child != nullptr) {
      return wildcard_child;
    }
    wildcard_child = new Node();
    return wildcard_child;
  }
```

```
    Node* NextNode(const std::string& path, size_t idx) const {
      if (idx >= path.length()) {
        return nullptr;
      }

      // wildcard node takes precedence
      if (children.size() > 1) {
        auto it = children.find('*');
        if (it != children.end()) {
          return it->second;
        }
      }

      auto it = children.find(path[idx]);
      if (it == children.end()) {
        return nullptr;
      }
      auto child = it->second;
      // match prefix
      size_t prefix_len = child->prefix.length();
      for (size_t i = 0; i < path.length(); ++i) {
        if (i >= prefix_len || child->prefix[i] == '*') {
          return
child;
        }

        // Handle optional trailing
        // path = /home/subdirectory
        // child = subdirectory/*
        if (idx >= path.length() &&
            child->prefix[i] == node::kPathSeparator) {
          continue;
        }

        if (path[idx++] != child->prefix[i]) {
          return nullptr;
        }
      }
      return child;
    }

    // A node can be a *end* node and have children
    // E.g: */slower*, */slown* are inserted:
    // /slow
    // ---> er
    // ---> n
    // If */slow* is inserted right after, it will create an
```

```
    // empty node
    // /slow
    // ---> '\000' ASCII (0) || \0
    // ---> er
    // ---> n
    bool IsEndNode() const {
      if (children.empty()) {
        return true;
      }
      return is_leaf;
    }
  };

  RadixTree();
  ~RadixTree();
  void Insert(const std::string& s);
  bool Lookup(const std::string_view& s) const { return Lookup(s, false);
 }
  bool Lookup(const std::string_view& s, bool when_empty_return) const;

 private:
  Node* root_node_;
 };

private:
 void GrantAccess(PermissionScope scope, const std::string& param);
 // fs granted on startup
 RadixTree granted_in_fs_;
 RadixTree granted_out_fs_;

 bool deny_all_in_ = true;
 bool deny_all_out_ = true;

 bool allow_all_in_ = false;
 bool allow_all_out_ = false;
};

}  // namespace permission

}  // namespace node

#endif  // defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS
#endif  // SRC_PERMISSION_FS_PERMISSION_H_
```


Apache License
Version 2.0, January 2004
https://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally

submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the

content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

https://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
UNRECOGNIZED LICENSE; MD5 sum: 9b06e0787814edfe98666e676afd12e4
This software is dual-licensed under the ISC and MIT licenses.
You may use this software under EITHER of the following licenses.

The ISC License

Copyright (c) Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Copyright Isaac Z. Schlueter and Contributors
All rights reserved.

Permission is
hereby granted, free of charge, to any person
obtaining a copy of this software and associated documentation
files (the "Software"), to deal in the Software without
restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the

Software is furnished to do so, subject to the following
conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT
HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
OTHER DEALINGS IN THE
SOFTWARE.
The code in this repository code was Written by Gil Tene, Michael Barker,
and Matt Warren, and released to the public domain, as explained at
http://creativecommons.org/publicdomain/zero/1.0/

For users of this code who wish to consume it under the "BSD" license
rather than under the public domain or CC0 contribution text mentioned
above, the code found under this directory is *also* provided under the
following license (commonly referred to as the BSD 2-Clause License). This
license does not detract from the above stated release of the code into
the public domain, and simply represents an additional license granted by
the Author.

** Beginning of "BSD 2-Clause License" text. **

Copyright (c) 2012, 2013, 2014 Gil Tene
Copyright (c) 2014 Michael Barker
Copyright (c) 2014 Matt Warren
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided
that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice,
   this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
   this list of conditions and the following disclaimer in the documentation
   and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE

IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF
THE POSSIBILITY OF SUCH DAMAGE.
The 3-Clause BSD License

Copyright 2019 web-platform-tests contributors

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL
THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise

designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any

risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

The MIT License (MIT)

Copyright (c) 2018 Made With MOXY Lda <hello@moxy.studio>

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

```
/*
* WARNING: do not edit!
* Generated by util/mkbuildinf.pl
*
* Copyright 2014-2025 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#define PLATFORM "platform: BSD-x86_64"
#define DATE "built on: Wed Mar  5 20:59:54 2025 UTC"

/*
* Generate compiler_flags as an array of individual characters. This is a
* workaround for the situation where CFLAGS gets too long for a C90 string
* literal
*/
static const char compiler_flags[] = {
```

```
  'c','o','m','p','i','l','e','r',':',' ','.','.','/','c','o','n',
  'f','i','g','/','f','a','k','e','_','g','c','c','.','p','l',' ',
  '-','f','P','I','C',' ','-','p','t','h','r','e','a','d',' ','-',
  'W','a',',','-','-','n','o','e','x','e','c','s','t','a','c','k',
  ' ','-','W','a','l','l','
,'-','O','3',' ','-','D','L','_','E',
  'N','D','I','A','N',' ','-','D','O','P','E','N','S','S','L','_',
  'P','I','C',' ','-','D','_','T','H','R','E','A','D','_','S','A',
  'F','E',' ','-','D','_','R','E','E','N','T','R','A','N','T',' ',
  '-','D','O','P','E','N','S','S','L','_','B','U','I','L','D','I',
  'N','G','_','O','P','E','N','S','S','L',' ','-','D','N','D','E',
  'B','U','G','\0'
};
```

Copyright 2008, Google Inc.
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall
mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial revisions, annotations, elaborations, or other modifications
represent, as a whole, an original
work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the
Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity
on behalf of whom a Contribution has been received by Licensor and
subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
copyright license to reproduce, prepare Derivative Works of,
publicly display, publicly perform, sublicense, and distribute the
Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
(except as stated in this section) patent license to
make, have made,
use, offer to sell, sell, import, and otherwise transfer the Work,
where such license applies only to those patent claims licensable
by such Contributor that are necessarily infringed by their
Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients
of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices

stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along
with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each

Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility
of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The
text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2024 SWC contributors.

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

 http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

```
/*
* WARNING: do not edit!
* Generated by util/mkbuildinf.pl
*
* Copyright 2014-2025 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#define PLATFORM "platform: BSD-x86_64"
#define DATE "built on: Wed Mar  5 21:00:10 2025 UTC"

/*
* Generate compiler_flags as an array of individual characters. This is a
* workaround for the situation where CFLAGS gets too long for a C90 string
* literal
*/
static const char compiler_flags[] = {
   'c','o','m','p','i','l','e','r',':',' ','c','c',' ','-','f','P',
   'I','C',' ','-','p','t','h','r','e','a','d',' ','-','W','a','l',
   'l',' ','-','O','3',' ','-','D','L','_','E','N','D','I','A','N',
   ' ','-','D','O','P','E','N','S','S','L','_','P','I','C',' ','-',
   'D','_','T','H','R','E','A','D','_','S','A','F','E','
 ','-','D',
   '_','R','E','E','N','T','R','A','N','T',' ','-','D','O','P','E',
   'N','S','S','L','_','B','U','I','L','D','I','N','G','_','O','P',
   'E','N','S','S','L',' ','-','D','N','D','E','B','U','G','\0'
};
```

The MIT License

Copyright (c) 2019 nghttp3 contributors

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the

"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR
 IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/conf.h.in
*
* Copyright 1995-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#ifndef OPENSSL_CONF_H
define OPENSSL_CONF_H
pragma once

include <openssl/macros.h>
ifndef OPENSSL_NO_DEPRECATED_3_0
define HEADER_CONF_H
endif

include <openssl/bio.h>
include <openssl/lhash.h>
include <openssl/safestack.h>
include <openssl/e_os2.h>
include <openssl/types.h>
include <openssl/conferr.h>

#ifdef __cplusplus

```
extern "C" {
#endif

typedef struct {
  char *section;
  char *name;
  char *value;
} CONF_VALUE;

SKM_DEFINE_STACK_OF_INTERNAL(CONF_VALUE, CONF_VALUE, CONF_VALUE)
#define sk_CONF_VALUE_num(sk) OPENSSL_sk_num(ossl_check_const_CONF_VALUE_sk_type(sk))
#define
 sk_CONF_VALUE_value(sk, idx) ((CONF_VALUE
*)OPENSSL_sk_value(ossl_check_const_CONF_VALUE_sk_type(sk), (idx)))
#define sk_CONF_VALUE_new(cmp) ((STACK_OF(CONF_VALUE)
*)OPENSSL_sk_new(ossl_check_CONF_VALUE_compfunc_type(cmp)))
#define sk_CONF_VALUE_new_null() ((STACK_OF(CONF_VALUE) *)OPENSSL_sk_new_null())
#define sk_CONF_VALUE_new_reserve(cmp, n) ((STACK_OF(CONF_VALUE)
*)OPENSSL_sk_new_reserve(ossl_check_CONF_VALUE_compfunc_type(cmp), (n)))
#define sk_CONF_VALUE_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_CONF_VALUE_sk_type(sk), (n))
#define sk_CONF_VALUE_free(sk) OPENSSL_sk_free(ossl_check_CONF_VALUE_sk_type(sk))
#define sk_CONF_VALUE_zero(sk) OPENSSL_sk_zero(ossl_check_CONF_VALUE_sk_type(sk))
#define sk_CONF_VALUE_delete(sk, i) ((CONF_VALUE
*)OPENSSL_sk_delete(ossl_check_CONF_VALUE_sk_type(sk), (i)))
#define sk_CONF_VALUE_delete_ptr(sk, ptr) ((CONF_VALUE
*)OPENSSL_sk_delete_ptr(ossl_check_CONF_VALUE_sk_type(sk), ossl_check_CONF_VALUE_type(ptr)))
#define
 sk_CONF_VALUE_push(sk, ptr) OPENSSL_sk_push(ossl_check_CONF_VALUE_sk_type(sk),
ossl_check_CONF_VALUE_type(ptr))
#define sk_CONF_VALUE_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_CONF_VALUE_sk_type(sk),
ossl_check_CONF_VALUE_type(ptr))
#define sk_CONF_VALUE_pop(sk) ((CONF_VALUE
*)OPENSSL_sk_pop(ossl_check_CONF_VALUE_sk_type(sk)))
#define sk_CONF_VALUE_shift(sk) ((CONF_VALUE
*)OPENSSL_sk_shift(ossl_check_CONF_VALUE_sk_type(sk)))
#define sk_CONF_VALUE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_CONF_VALUE_sk_type(sk),ossl_check_CONF_VALUE_freefunc_type(freef
unc))
#define sk_CONF_VALUE_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_CONF_VALUE_sk_type(sk),
ossl_check_CONF_VALUE_type(ptr), (idx))
#define sk_CONF_VALUE_set(sk, idx, ptr) ((CONF_VALUE
*)OPENSSL_sk_set(ossl_check_CONF_VALUE_sk_type(sk), (idx), ossl_check_CONF_VALUE_type(ptr)))
#define sk_CONF_VALUE_find(sk, ptr) OPENSSL_sk_find(ossl_check_CONF_VALUE_sk_type(sk),
ossl_check_CONF_VALUE_type(ptr))
#define sk_CONF_VALUE_find_ex(sk,
 ptr) OPENSSL_sk_find_ex(ossl_check_CONF_VALUE_sk_type(sk), ossl_check_CONF_VALUE_type(ptr))
#define sk_CONF_VALUE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_CONF_VALUE_sk_type(sk), ossl_check_CONF_VALUE_type(ptr), pnum)
```

```
#define sk_CONF_VALUE_sort(sk) OPENSSL_sk_sort(ossl_check_CONF_VALUE_sk_type(sk))
#define sk_CONF_VALUE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_CONF_VALUE_sk_type(sk))
#define sk_CONF_VALUE_dup(sk) ((STACK_OF(CONF_VALUE)
*)OPENSSL_sk_dup(ossl_check_const_CONF_VALUE_sk_type(sk)))
#define sk_CONF_VALUE_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(CONF_VALUE)
*)OPENSSL_sk_deep_copy(ossl_check_const_CONF_VALUE_sk_type(sk),
ossl_check_CONF_VALUE_copyfunc_type(copyfunc), ossl_check_CONF_VALUE_freefunc_type(freefunc)))
#define sk_CONF_VALUE_set_cmp_func(sk, cmp)
((sk_CONF_VALUE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_CONF_VALUE_sk_type(sk),
ossl_check_CONF_VALUE_compfunc_type(cmp)))
DEFINE_LHASH_OF_INTERNAL(CONF_VALUE);
#define
 lh_CONF_VALUE_new(hfn, cmp) ((LHASH_OF(CONF_VALUE)
*)OPENSSL_LH_new(ossl_check_CONF_VALUE_lh_hashfunc_type(hfn),
ossl_check_CONF_VALUE_lh_compfunc_type(cmp)))
#define lh_CONF_VALUE_free(lh) OPENSSL_LH_free(ossl_check_CONF_VALUE_lh_type(lh))
#define lh_CONF_VALUE_flush(lh) OPENSSL_LH_flush(ossl_check_CONF_VALUE_lh_type(lh))
#define lh_CONF_VALUE_insert(lh, ptr) ((CONF_VALUE
*)OPENSSL_LH_insert(ossl_check_CONF_VALUE_lh_type(lh),
ossl_check_CONF_VALUE_lh_plain_type(ptr)))
#define lh_CONF_VALUE_delete(lh, ptr) ((CONF_VALUE
*)OPENSSL_LH_delete(ossl_check_CONF_VALUE_lh_type(lh),
ossl_check_const_CONF_VALUE_lh_plain_type(ptr)))
#define lh_CONF_VALUE_retrieve(lh, ptr) ((CONF_VALUE
*)OPENSSL_LH_retrieve(ossl_check_CONF_VALUE_lh_type(lh),
ossl_check_const_CONF_VALUE_lh_plain_type(ptr)))
#define lh_CONF_VALUE_error(lh) OPENSSL_LH_error(ossl_check_CONF_VALUE_lh_type(lh))
#define lh_CONF_VALUE_num_items(lh) OPENSSL_LH_num_items(ossl_check_CONF_VALUE_lh_type(lh))
#define lh_CONF_VALUE_node_stats_bio(lh,
 out) OPENSSL_LH_node_stats_bio(ossl_check_const_CONF_VALUE_lh_type(lh), out)
#define lh_CONF_VALUE_node_usage_stats_bio(lh, out)
OPENSSL_LH_node_usage_stats_bio(ossl_check_const_CONF_VALUE_lh_type(lh), out)
#define lh_CONF_VALUE_stats_bio(lh, out)
OPENSSL_LH_stats_bio(ossl_check_const_CONF_VALUE_lh_type(lh), out)
#define lh_CONF_VALUE_get_down_load(lh)
OPENSSL_LH_get_down_load(ossl_check_CONF_VALUE_lh_type(lh))
#define lh_CONF_VALUE_set_down_load(lh, dl)
OPENSSL_LH_set_down_load(ossl_check_CONF_VALUE_lh_type(lh), dl)
#define lh_CONF_VALUE_doall(lh, dfn) OPENSSL_LH_doall(ossl_check_CONF_VALUE_lh_type(lh),
ossl_check_CONF_VALUE_lh_doallfunc_type(dfn))


struct conf_st;
struct conf_method_st;
typedef struct conf_method_st CONF_METHOD;

# ifndef OPENSSL_NO_DEPRECATED_3_0
```

```
#  include <openssl/conftypes.h>
# endif

/* Module definitions */
typedef struct conf_imodule_st CONF_IMODULE;
typedef struct conf_module_st CONF_MODULE;

STACK_OF(CONF_MODULE);
STACK_OF(CONF_IMODULE);

/* DSO module
 function typedefs */
typedef int conf_init_func (CONF_IMODULE *md, const CONF *cnf);
typedef void conf_finish_func (CONF_IMODULE *md);

# define CONF_MFLAGS_IGNORE_ERRORS       0x1
# define CONF_MFLAGS_IGNORE_RETURN_CODES 0x2
# define CONF_MFLAGS_SILENT              0x4
# define CONF_MFLAGS_NO_DSO              0x8
# define CONF_MFLAGS_IGNORE_MISSING_FILE 0x10
# define CONF_MFLAGS_DEFAULT_SECTION     0x20

int CONF_set_default_method(CONF_METHOD *meth);
void CONF_set_nconf(CONF *conf, LHASH_OF(CONF_VALUE) *hash);
LHASH_OF(CONF_VALUE) *CONF_load(LHASH_OF(CONF_VALUE) *conf, const char *file,
                        long *eline);
# ifndef OPENSSL_NO_STDIO
LHASH_OF(CONF_VALUE) *CONF_load_fp(LHASH_OF(CONF_VALUE) *conf, FILE *fp,
                           long *eline);
# endif
LHASH_OF(CONF_VALUE) *CONF_load_bio(LHASH_OF(CONF_VALUE) *conf, BIO *bp,
                            long *eline);
STACK_OF(CONF_VALUE) *CONF_get_section(LHASH_OF(CONF_VALUE) *conf,

                           const char *section);
char *CONF_get_string(LHASH_OF(CONF_VALUE) *conf, const char *group,
                  const char *name);
long CONF_get_number(LHASH_OF(CONF_VALUE) *conf, const char *group,
                 const char *name);
void CONF_free(LHASH_OF(CONF_VALUE) *conf);
#ifndef OPENSSL_NO_STDIO
int CONF_dump_fp(LHASH_OF(CONF_VALUE) *conf, FILE *out);
#endif
int CONF_dump_bio(LHASH_OF(CONF_VALUE) *conf, BIO *out);
#ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 void OPENSSL_config(const char *config_name);
#endif
```

```
#ifndef OPENSSL_NO_DEPRECATED_1_1_0
# define OPENSSL_no_config() \
  OPENSSL_init_crypto(OPENSSL_INIT_NO_LOAD_CONFIG, NULL)
#endif

/*
* New conf code.  The semantics are different from the functions above. If
* that wasn't the case, the above functions would have been replaced
*/

CONF *NCONF_new_ex(OSSL_LIB_CTX *libctx, CONF_METHOD *meth);
OSSL_LIB_CTX *NCONF_get0_libctx(const CONF *conf);
CONF *NCONF_new(CONF_METHOD
 *meth);
CONF_METHOD *NCONF_default(void);
#ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 CONF_METHOD *NCONF_WIN32(void);
#endif
void NCONF_free(CONF *conf);
void NCONF_free_data(CONF *conf);

int NCONF_load(CONF *conf, const char *file, long *eline);
# ifndef OPENSSL_NO_STDIO
int NCONF_load_fp(CONF *conf, FILE *fp, long *eline);
# endif
int NCONF_load_bio(CONF *conf, BIO *bp, long *eline);
STACK_OF(OPENSSL_CSTRING) *NCONF_get_section_names(const CONF *conf);
STACK_OF(CONF_VALUE) *NCONF_get_section(const CONF *conf,
                                const char *section);
char *NCONF_get_string(const CONF *conf, const char *group, const char *name);
int NCONF_get_number_e(const CONF *conf, const char *group, const char *name,
                   long *result);
#ifndef OPENSSL_NO_STDIO
int NCONF_dump_fp(const CONF *conf, FILE *out);
#endif
int NCONF_dump_bio(const CONF *conf, BIO *out);

#define NCONF_get_number(c,g,n,r) NCONF_get_number_e(c,g,n,r)

/* Module functions
 */

int CONF_modules_load(const CONF *cnf, const char *appname,
                  unsigned long flags);
int CONF_modules_load_file_ex(OSSL_LIB_CTX *libctx, const char *filename,
                      const char *appname, unsigned long flags);
int CONF_modules_load_file(const char *filename, const char *appname,
                       unsigned long flags);
```

```
void CONF_modules_unload(int all);
void CONF_modules_finish(void);
#ifndef OPENSSL_NO_DEPRECATED_1_1_0
# define CONF_modules_free() while(0) continue
#endif
int CONF_module_add(const char *name, conf_init_func *ifunc,
                    conf_finish_func *ffunc);

const char *CONF_imodule_get_name(const CONF_IMODULE *md);
const char *CONF_imodule_get_value(const CONF_IMODULE *md);
void *CONF_imodule_get_usr_data(const CONF_IMODULE *md);
void CONF_imodule_set_usr_data(CONF_IMODULE *md, void *usr_data);
CONF_MODULE *CONF_imodule_get_module(const CONF_IMODULE *md);
unsigned long CONF_imodule_get_flags(const CONF_IMODULE
 *md);
void CONF_imodule_set_flags(CONF_IMODULE *md, unsigned long flags);
void *CONF_module_get_usr_data(CONF_MODULE *pmod);
void CONF_module_set_usr_data(CONF_MODULE *pmod, void *usr_data);

char *CONF_get1_default_config_file(void);

int CONF_parse_list(const char *list, int sep, int nospc,
                    int (*list_cb) (const char *elem, int len, void *usr),
                    void *arg);

void OPENSSL_load_builtin_modules(void);


# ifdef  __cplusplus
}
# endif
#endif
```

Node.js is licensed for use as follows:

"""

Copyright Node.js contributors. All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR

IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

This license applies to parts of Node.js originating from the
https://github.com/joyent/node repository:

"""
Copyright Joyent, Inc. and other Node contributors. All rights reserved.
Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

The Node.js license applies to all parts of Node.js that are not externally
maintained libraries.

The externally maintained libraries used by Node.js are:

- Acorn, located at deps/acorn, is licensed as follows:
 """
  MIT License

  Copyright (C) 2012-2022 by various contributors (see AUTHORS)

  Permission is hereby granted, free of charge, to any person obtaining a copy
  of this software and associated documentation files (the "Software"), to deal
  in the Software without restriction, including without limitation the rights

to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit
persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.
"""

- c-ares, located at deps/cares, is licensed as follows:
"""
MIT License

Copyright (c) 1998 Massachusetts Institute of Technology
Copyright (c) 2007 - 2023 Daniel Stenberg with many contributors, see AUTHORS
file.

Permission is hereby granted, free
of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice (including the next
paragraph) shall be included in all copies or substantial portions of the
Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR
IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
"""

- cjs-module-lexer, located at deps/cjs-module-lexer, is licensed as follows:

"""
MIT License

Copyright (C) 2018-2020 Guy Bedford

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE
AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- ittapi, located at deps/v8/third_party/ittapi, is licensed as follows:
"""
Copyright (c) 2019 Intel Corporation. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors
may be used to endorse or promote products derived from this software without specific prior written permission.
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- amaro, located at deps/amaro, is licensed as follows:
"""

MIT License

Copyright (c) Marco Ippolito and
Amaro contributors

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
"""

- swc, located at deps/amaro/dist, is licensed as follows:
"""

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the

direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example
is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"

means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity
on behalf of whom a Contribution has been received by Licensor and
subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
copyright license to reproduce, prepare Derivative
Works of,
publicly display, publicly perform, sublicense, and distribute the
Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
(except as stated in this section) patent license to make, have made,
use, offer to sell, sell, import, and otherwise transfer the Work,
where such license applies only to those patent claims licensable
by such Contributor that are necessarily infringed by their
Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes
direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works;
and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding those notices that do not

pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from
the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding
such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability.
In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,

unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations
and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed
page" as the copyright notice for easier
identification within third-party archives.

Copyright 2024 SWC contributors.

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and

limitations under the License.
"""

- ICU, located at deps/icu-small, is licensed as follows:
"""
UNICODE LICENSE V3

COPYRIGHT AND PERMISSION NOTICE

Copyright 2016-2025 Unicode, Inc.

NOTICE TO USER: Carefully read the following legal agreement. BY
DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING DATA FILES, AND/OR
SOFTWARE, YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE
TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT
DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.

Permission is hereby granted, free of charge, to any person obtaining a
copy of data files and any associated documentation (the "Data Files") or
software and any associated documentation (the "Software") to deal in the
Data Files or Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, and/or sell
copies of the Data Files or Software, and to permit persons to whom the
Data Files or Software are furnished to do so, provided that either (a)
this copyright and permission notice appear with all copies of the Data
Files or Software, or (b) this copyright and permission notice appear in
associated Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS
IS", WITHOUT WARRANTY OF ANY
KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF
THIRD PARTY RIGHTS.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE
BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES,
OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS,
WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION,
ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA
FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall
not be used in advertising or otherwise to promote the sale, use or other
dealings in these Data Files or Software without prior written
authorization of the copyright holder.

SPDX-License-Identifier: Unicode-3.0

Third-Party Software Licenses

This section contains third-party software notices and/or additional terms for licensed third-party software components included within ICU libraries.

ICU License - ICU 1.8.1 to ICU 57.1

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others
All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

All trademarks and registered trademarks mentioned herein are the property of their respective owners.

Chinese/Japanese Word Break Dictionary Data (cjdict.txt)

```
#     The Google Chrome software developed by Google is licensed under
# the BSD license. Other software included in this distribution is
# provided under other licenses, as set forth below.
#
#  The BSD License
#  http://opensource.org/licenses/bsd-license.php
#  Copyright (C) 2006-2008, Google Inc.
#
#  All rights reserved.
#
#  Redistribution and use in source and binary forms, with or without
# modification, are permitted provided that the following conditions are met:
#
#  Redistributions of source code must retain the above copyright notice,
# this list of conditions and the following disclaimer.
#  Redistributions in binary form must reproduce the above
# copyright notice,
this list of conditions and the following
# disclaimer in the documentation and/or other materials provided with
# the distribution.
#  Neither the name of  Google Inc. nor the names of its
# contributors may be used to endorse or promote products derived from
# this software without specific prior written permission.
#
#
#  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
# CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
# INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
# MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
# DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
# LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
# CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
# SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
# BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
# LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
# NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
# SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
#
#
#  The word list in cjdict.txt are generated by combining three word lists
# listed below with further processing for compound word breaking. The
# frequency is generated with an iterative training against Google web
# corpora.
#
```

```
#  * Libtabe (Chinese)
#    - https://sourceforge.net/project/?group_id=1519
#    - Its license terms and conditions are shown below.
#
#  * IPADIC (Japanese)
#    - http://chasen.aist-nara.ac.jp/chasen/distribution.html
#    - Its license terms and conditions are shown below.
#
#  ---------COPYING.libtabe ---- BEGIN--------------------
#
#  /*
#   * Copyright (c) 1999 TaBE Project.
#   * Copyright (c) 1999 Pai-Hsiang Hsiao.
#   * All rights reserved.

#  *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the TaBE Project nor the names of its
#   *   contributors may be used to endorse or promote products derived
#   *   from this software without specific prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   *
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  /*
#   * Copyright (c) 1999 Computer Systems and Communication Lab,
#   *                    Institute of Information Science, Academia
```

```
#     *                Sinica. All rights reserved.
#  *
#  * Redistribution and use in source
and binary forms, with or without
#  * modification, are permitted provided that the following conditions
#  * are met:
#  *
#  * . Redistributions of source code must retain the above copyright
#  *   notice, this list of conditions and the following disclaimer.
#  * . Redistributions in binary form must reproduce the above copyright
#  *   notice, this list of conditions and the following disclaimer in
#  *   the documentation and/or other materials provided with the
#  *   distribution.
#  * . Neither the name of the Computer Systems and Communication Lab
#  *   nor the names of its contributors may be used to endorse or
#  *   promote products derived from this software without specific
#  *   prior written permission.
#  *
#  * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#  * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#  * LIMITED
TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#  * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#  * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#  * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#  * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#  * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#  * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#  * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#  * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#  * OF THE POSSIBILITY OF SUCH DAMAGE.
#  */
#
#  Copyright 1996 Chih-Hao Tsai @ Beckman Institute,
#     University of Illinois
#  c-tsai4@uiuc.edu  http://casper.beckman.uiuc.edu/~c-tsai4
#
#  ----------------COPYING.libtabe-----END--------------------------------
#
#
#  ----------------COPYING.ipadic-----BEGIN-------------------------------
 #
#  Copyright 2000, 2001, 2002, 2003 Nara Institute of Science
#  and Technology.  All Rights Reserved.
#
#  Use, reproduction, and distribution of this software is permitted.
#  Any copy of this software, whether in its original form or modified,
#  must include both the above copyright notice and the following
```

paragraphs.
#
Nara Institute of Science and Technology (NAIST),
the copyright holders, disclaims all warranties with regard to this
software, including all implied warranties of merchantability and
fitness, in no event shall NAIST be liable for
any special, indirect or consequential damages or any damages
whatsoever resulting from loss of use, data or profits, whether in an
action of contract, negligence or other tortuous action, arising out
of or in connection with the use or performance of this software.
#
A large portion of the dictionary entries
originate from ICOT Free Software. The following conditions for ICOT
Free Software applies to the current dictionary as well.
#
Each User may also freely distribute the Program, whether in its
original form or modified, to any third party or parties, PROVIDED
that the provisions of Section 3 ("NO WARRANTY") will ALWAYS appear
on, or be attached to, the Program, which is distributed substantially
in the same form as set out herein and that such intended
distribution, if actually made, will neither violate or otherwise
contravene any of the laws and regulations of the countries having
jurisdiction over the User or the intended distribution itself.
#
NO WARRANTY
#
The program was produced on an experimental basis in the course of the
research and development conducted during the project and is provided
to
users as so produced on an experimental basis. Accordingly, the
program is provided without any warranty whatsoever, whether express,
implied, statutory or otherwise. The term "warranty" used herein
includes, but is not limited to, any warranty of the quality,
performance, merchantability and fitness for a particular purpose of
the program and the nonexistence of any infringement or violation of
any right of any third party.
#
Each user of the program will agree and understand, and be deemed to
have agreed and understood, that there is no warranty whatsoever for
the program and, accordingly, the entire risk arising from or
otherwise connected with the program is assumed by the user.
#
Therefore, neither ICOT, the copyright holder, or any other
organization that participated in or was otherwise related to the
development of the program and their respective officials, directors,
officers and other employees shall be held liable for any and all
damages, including, without limitation, general, special, incidental
and consequential damages, arising out of or otherwise in connection

with the use or inability to use the program or any product, material
or result produced or otherwise obtained by using the program,
regardless of whether they have been advised of, or otherwise had
knowledge of, the possibility of such damages at any time during the
project or thereafter. Each user will be deemed to have agreed to the
foregoing by his or her commencement of use of the program. The term
"use" as used herein includes, but is not limited to, the use,
modification, copying and distribution of the program and the
production of secondary products from the program.
#
In the case where the program, whether in its original form or
modified, was distributed
or delivered to or received by a user from
any person, organization or entity other than ICOT, unless it makes or
grants independently of ICOT any specific warranty to the user in
writing, such person, organization or entity, will also be exempted
from and not be held liable to the user for any such damages as noted
above as far as the program is concerned.
#
----------COPYING.ipadic-----END----------

Lao Word Break Dictionary Data (laodict.txt)

Copyright (C) 2016 and later: Unicode, Inc. and others.
License & terms of use: http://www.unicode.org/copyright.html
Copyright (c) 2015 International Business Machines Corporation
and others. All Rights Reserved.
#
Project: https://github.com/rober42539/lao-dictionary
Dictionary: https://github.com/rober42539/lao-dictionary/laodict.txt
License: https://github.com/rober42539/lao-dictionary/LICENSE.txt
(copied below)
#
This file is derived from the above dictionary version of Nov 22, 2020

Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:
#
Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer. Redistributions in binary
form must reproduce the above copyright notice, this list of conditions and
the following disclaimer in the documentation and/or other materials
provided with the distribution.

#
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS

"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
OF THE POSSIBILITY OF SUCH DAMAGE.

Burmese Word Break Dictionary Data (burmesedict.txt)

Copyright (c)
2014 International Business Machines Corporation
and others. All Rights Reserved.
#
This list is part of a project hosted at:
github.com/kanyawtech/myanmar-karen-word-lists
#

Copyright (c) 2013, LeRoy Benjamin Sharon
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met: Redistributions of source code must retain the above
copyright notice, this list of conditions and the following
disclaimer. Redistributions in binary form must reproduce the
above copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
#
Neither the name Myanmar Karen Word Lists, nor the names of its

contributors may be used to endorse or promote products derived
from this software without specific prior written permission.
#
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF

MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED
TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF
THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH
DAMAGE.
--

Time Zone Database

ICU uses the public domain data and code derived from Time Zone
Database for its time zone support. The ownership of the TZ database
is explained in BCP 175: Procedure for Maintaining the Time Zone
Database section 7.

7. Database Ownership
#
The TZ database itself is not an IETF Contribution or an IETF
document. Rather it is a pre-existing and regularly updated work
that is in the public domain, and is intended to remain in the
public domain. Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do
not apply to the TZ Database or contributions that individuals make
to it. Should any claims be made and substantiated against the TZ
Database, the organization that is providing the IANA
Considerations
defined in this RFC, under the memorandum of
understanding with the IETF, currently ICANN, may act in accordance
with all competent court orders. No ownership claims will be made
by ICANN or the IETF Trust on the database or the code. Any person
making a contribution to the database or code waives all rights to
future claims in that contribution or in the TZ Database.

Google double-conversion

Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice,
this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived
from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

JSON parsing library (nlohmann/json)

File: vendor/json/upstream/single_include/nlohmann/json.hpp (only for ICU4C)

MIT License

Copyright (c) 2013-2022 Niels Lohmann

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of
the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE

AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

File: aclocal.m4 (only for ICU4C)
Section: pkg.m4 - Macros to locate and utilise pkg-config.

Copyright 2004 Scott James Remnant .
Copyright 2012-2015 Dan Nicholson

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option)
any later version.

This program is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA
02111-1307, USA.

As a special exception to the GNU General Public License, if you
distribute this file as part of a program that contains a
configuration script generated by Autoconf, you may include it under
the same distribution terms that you use for the rest of that
program.

(The condition for the exception is fulfilled because
ICU4C includes a configuration script generated by Autoconf,
namely the `configure` script.)

File: config.guess (only for ICU4C)

This file is free software; you can redistribute it and/or modify it
under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, see .

As a special exception to the GNU General Public License, if you
distribute this file as part of a program that contains a
configuration script generated by Autoconf, you may include it under
the same distribution terms that you use for the rest of that
program. This Exception is an additional permission under
section 7
of the GNU General Public License, version 3 ("GPLv3").

(The condition for the exception is fulfilled because
ICU4C includes a configuration script generated by Autoconf,
namely the `configure` script.)

File: install-sh (only for ICU4C)

Copyright 1991 by the Massachusetts Institute of Technology

Permission to use, copy, modify, distribute, and sell this software and its
documentation for any purpose is hereby granted without fee, provided that
the above copyright notice appear in all copies and that both that
copyright notice and this permission notice appear in supporting
documentation, and that the name of M.I.T. not be used in advertising or
publicity pertaining to distribution of the software without specific,
written prior permission. M.I.T. makes no representations about the
suitability of this software for any purpose. It is provided
"as is"
without express or implied warranty.
"""

- libuv, located at deps/uv, is licensed as follows:
"""
Copyright (c) 2015-present libuv project contributors.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT
SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
IN THE SOFTWARE.
This license applies to parts of libuv originating from the
https://github.com/joyent/libuv repository:

====

Copyright Joyent, Inc. and other Node contributors. All rights reserved.
Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
IN THE SOFTWARE.

====

This license applies to all parts of libuv that are not externally
maintained libraries.

The externally maintained libraries used by libuv are:

- tree.h (from FreeBSD), copyright Niels Provos. Two clause BSD license.

- inet_pton and inet_ntop implementations, contained in src/inet.c, are
  copyright the Internet Systems Consortium, Inc., and licensed under the ISC
  license.

"""

- llhttp, located at
deps/llhttp, is licensed as follows:
"""
This software is licensed under the MIT License.

Copyright Fedor Indutny, 2018.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to permit
persons to whom the Software is furnished to do so, subject to the
following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN
NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS
BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE
USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- corepack, located at deps/corepack, is licensed as follows:
"""
Copyright Corepack contributors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING
BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE

SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- undici, located at deps/undici, is licensed as follows:
"""
MIT License

Copyright (c) Matteo Collina and Undici contributors

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright
notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
"""

- postject, located at test/fixtures/postject-copy, is licensed as follows:
"""
Postject is licensed for use as follows:

"""
MIT License

Copyright (c) 2022 Postman, Inc

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction,
including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

The Postject license applies to all parts of Postject that are not externally maintained libraries.

The externally maintained libraries used by Postject are:

- LIEF, located at vendor/LIEF, is licensed as follows:
"""

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i)
the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical

transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or

Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally

submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and

subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable

(except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable

by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed

as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or
distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and
customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless
required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing

the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "{}"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description
of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2017 - 2022 R. Thomas
Copyright 2017 - 2022 Quarkslab

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
"""
"""

- OpenSSL, located at deps/openssl, is licensed as follows:
"""
Apache
License
Version 2.0, January 2004
https://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or
(iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object

form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally

submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the
Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly
perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes
direct
or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any
part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that
You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall
supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the

origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness
of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability.
While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS
"""

- Punycode.js, located at lib/punycode.js, is licensed as follows:
"""
Copyright Mathias Bynens <https://mathiasbynens.be/>

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation
files (the
"Software"), to deal in the Software without restriction, including

without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- V8, located at deps/v8, is licensed
as follows:
"""
This license applies to all parts of V8 that are not externally
maintained libraries. The externally maintained libraries used by V8
are:

- PCRE test suite, located in
test/mjsunit/third_party/regexp-pcre/regexp-pcre.js. This is based on the
test suite from PCRE-7.3, which is copyrighted by the University
of Cambridge and Google, Inc. The copyright notice and license
are embedded in regexp-pcre.js.

- Layout tests, located in test/mjsunit/third_party/object-keys. These are
based on layout tests from webkit.org which are copyrighted by
Apple Computer, Inc. and released under a 3-clause BSD license.

- Strongtalk assembler, the basis of the files assembler-arm-inl.h,
assembler-arm.cc, assembler-arm.h, assembler-ia32-inl.h,
assembler-ia32.cc, assembler-ia32.h, assembler-x64-inl.h,
assembler-x64.cc, assembler-x64.h, assembler.cc and assembler.h.
This code is
copyrighted by Sun Microsystems Inc. and released
under a 3-clause BSD license.

- Valgrind client API header, located at src/third_party/valgrind/valgrind.h
This is released under the BSD license.

- The Wasm C/C++ API headers, located at third_party/wasm-api/wasm.{h,hh}
This is released under the Apache license. The API's upstream prototype
implementation also formed the basis of V8's implementation in

src/wasm/c-api.cc.

These libraries have their own licenses; we recommend you read them,
as their terms may differ from the terms below.

Further license information can be found in LICENSE files located in
sub-directories.

Copyright 2014, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright

notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived
from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- SipHash, located at deps/v8/src/third_party/siphash, is licensed as follows:
"""
SipHash reference C implementation

Copyright (c) 2016 Jean-Philippe Aumasson <jeanphilippe.aumasson@gmail.com>

To the extent possible under law, the author(s) have dedicated all
copyright and related and neighboring rights to this software to the public
domain worldwide. This software is distributed without any warranty.
"""

- zlib, located at deps/zlib, is licensed as follows:
"""

zlib.h -- interface of the 'zlib' general purpose compression library
version 1.3.0.1, August xxth, 2023

Copyright (C) 1995-2023 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied
warranty. In no event will the authors be held liable for any damages
arising from the use of this software.

Permission is granted to anyone to use this software for any purpose,
including commercial applications, and to alter it and redistribute it
freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not
claim that you wrote the original software. If you use this software
in a product, an acknowledgment in the product documentation would be
appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be
misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly Mark Adler
jloup@gzip.org madler@alumni.caltech.edu
"""

- simdjson, located at deps/simdjson, is
licensed as follows:
"""

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,

"control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity

on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce,
prepare Derivative Works of,
publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not

pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your
own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or
conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE.
You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,

unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility
of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets
"{}"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2018-2025 The simdjson authors

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing

permissions and
limitations under the License.
"""

- simdutf, located at deps/simdutf, is licensed as follows:
"""
Copyright 2021 The simdutf authors

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR
COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER
IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- ada, located at deps/ada, is licensed as follows:
"""
Copyright 2023 Yagiz Nizipli and Daniel Lemire

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS",
WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR
COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER
IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

"""

- minimatch, located at deps/minimatch, is licensed as follows:
"""
The ISC License

Copyright (c) 2011-2023 Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND
FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
"""

- npm, located at deps/npm, is licensed as follows:
"""
The npm application
Copyright (c) npm, Inc. and Contributors
Licensed on the terms of The Artistic License 2.0

Node package dependencies of the npm application
Copyright (c) their respective copyright owners
Licensed on their respective license terms

The npm public registry at https://registry.npmjs.org
and the npm website at https://www.npmjs.com
Operated by npm, Inc.
Use governed by terms published on https://www.npmjs.com

"Node.js"
Trademark Joyent, Inc., https://joyent.com
Neither npm nor npm, Inc. are affiliated with Joyent,
Inc.

The Node.js application
Project of Node Foundation, https://nodejs.org

The npm Logo
Copyright (c) Mathias Pettersson and Brian Hammond

"Gubblebum Blocky" typeface
Copyright (c) Tjarda Koster, https://jelloween.deviantart.com
Used with permission

The Artistic License 2.0

Copyright (c) 2000-2006, The Perl Foundation.

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

This license establishes the terms under which a given free software
Package may be copied, modified, distributed, and/or redistributed.
The intent is that the Copyright Holder maintains some artistic
control over the development of that Package while still keeping the
Package available as open source and free software.

You are always permitted to make arrangements wholly outside of this
license directly with the Copyright Holder of a given Package.
If the
terms of this license do not permit the full use that you propose to
make of the Package, you should contact the Copyright Holder and seek
a different licensing arrangement.

Definitions

"Copyright Holder" means the individual(s) or organization(s)
named in the copyright notice for the entire Package.

"Contributor" means any party that has contributed code or other
material to the Package, in accordance with the Copyright Holder's
procedures.

"You" and "your" means any person who would like to copy,
distribute, or modify the Package.

"Package" means the collection of files distributed by the
Copyright Holder, and derivatives of that collection and/or of
those files. A given Package may consist of either the Standard
Version, or a Modified Version.

"Distribute" means providing a copy of the Package or making it
accessible to anyone else, or in the case

of a company or
organization, to others outside of your company or organization.

"Distributor Fee" means any fee that you charge for Distributing this Package or providing support for this Package to another party. It does not mean licensing fees.

"Standard Version" refers to the Package if it has not been modified, or has been modified only in ways explicitly requested by the Copyright Holder.

"Modified Version" means the Package, if it has been changed, and such changes were not explicitly requested by the Copyright Holder.

"Original License" means this Artistic License as Distributed with the Standard Version of the Package, in its current version or as it may be modified by The Perl Foundation in the future.

"Source" form means the source code, documentation source, and configuration files for the Package.

"Compiled" form means the compiled bytecode,
object code, binary,
or any other form resulting from mechanical transformation or translation of the Source form.

Permission for Use and Modification Without Distribution

(1) You are permitted to use the Standard Version and create and use Modified Versions for any purpose without restriction, provided that you do not Distribute the Modified Version.

Permissions for Redistribution of the Standard Version

(2) You may Distribute verbatim copies of the Source form of the Standard Version of this Package in any medium without restriction, either gratis or for a Distributor Fee, provided that you duplicate all of the original copyright notices and associated disclaimers. At your discretion, such verbatim copies may or may not include a Compiled form of the Package.

(3) You may apply any bug fixes, portability changes, and other modifications made available from the Copyright Holder. The resulting Package
will still be considered the Standard Version, and as such
will be subject to the Original License.

Distribution of Modified Versions of the Package as Source

(4) You may Distribute your Modified Version as Source (either gratis or for a Distributor Fee, and with or without a Compiled form of the Modified Version) provided that you clearly document how it differs from the Standard Version, including, but not limited to, documenting any non-standard features, executables, or modules, and provided that you do at least ONE of the following:

(a) make the Modified Version available to the Copyright Holder of the Standard Version, under the Original License, so that the Copyright Holder may include your modifications in the Standard Version.

(b) ensure that installation of your Modified Version does not prevent the user installing or running the Standard Version. In addition, the Modified Version
must bear a name that is different
from the name of the Standard Version.

(c) allow anyone who receives a copy of the Modified Version to make the Source form of the Modified Version available to others under

(i) the Original License or

(ii) a license that permits the licensee to freely copy, modify and redistribute the Modified Version using the same licensing terms that apply to the copy that the licensee received, and requires that the Source form of the Modified Version, and of any works derived from it, be made freely available in that license fees are prohibited but Distributor Fees are allowed.

Distribution of Compiled Forms of the Standard Version
or Modified Versions without the Source

(5) You may Distribute Compiled forms of the Standard Version without the Source, provided that you include complete instructions on how to

get the Source of the Standard Version. Such instructions must be valid at the time of your distribution. If these instructions, at any time while you are carrying out such distribution, become invalid, you must provide new instructions on demand or cease further distribution. If you provide valid instructions or cease distribution within thirty days after you become aware that the instructions are invalid, then you do not forfeit any of your rights under this license.

(6) You may Distribute a Modified Version in Compiled form without the Source, provided that you comply with Section 4 with respect to the Source of the Modified Version.

Aggregating or Linking the Package

(7) You may aggregate the Package (either the Standard Version or Modified Version) with other packages and Distribute the resulting aggregation provided that you do not charge a licensing fee for the Package. Distributor Fees are permitted, and licensing fees for other components in the aggregation are permitted. The terms of this license apply to the use and Distribution of the Standard or Modified Versions as included in the aggregation.

(8) You are permitted to link Modified and Standard Versions with other works, to embed the Package in a larger work of your own, or to build stand-alone binary or bytecode versions of applications that include the Package, and Distribute the result without restriction, provided the result does not expose a direct interface to the Package.

Items That are Not Considered Part of a Modified Version

(9) Works (including, but not limited to, modules and scripts) that merely extend or make use of the Package, do not, by themselves, cause the Package to be a Modified Version. In addition, such works are not considered parts of the Package itself, and are not subject to the terms of this license.

General Provisions

(10) Any use, modification, and distribution of the Standard or Modified Versions is governed by this Artistic License. By using, modifying or distributing the Package, you accept this license. Do not use, modify, or distribute the Package, if you do not accept this license.

(11) If your Modified Version has been derived from a Modified Version made by someone other than you, you are nevertheless required to ensure that your Modified Version complies with the requirements of this license.

(12) This license does not grant you the right to use any trademark, service mark, tradename, or logo of the Copyright Holder.

(13) This license includes the non-exclusive, worldwide, free-of-charge patent license to make, have made, use, offer to sell,

sell, import and otherwise transfer the Package with respect to any
patent claims licensable by the Copyright Holder that are necessarily
infringed by the Package. If you institute patent litigation
(including
a cross-claim or counterclaim) against any party alleging
that the Package constitutes direct or contributory patent
infringement, then this Artistic License to you shall terminate on the
date that such litigation is filed.

(14) Disclaimer of Warranty:
THE PACKAGE IS PROVIDED BY THE COPYRIGHT HOLDER AND CONTRIBUTORS "AS
IS' AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES. THE IMPLIED
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR
NON-INFRINGEMENT ARE DISCLAIMED TO THE EXTENT PERMITTED BY YOUR LOCAL
LAW. UNLESS REQUIRED BY LAW, NO COPYRIGHT HOLDER OR CONTRIBUTOR WILL
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL
DAMAGES ARISING IN ANY WAY OUT OF THE USE OF THE PACKAGE, EVEN IF
ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

"""

- GYP, located at tools/gyp, is licensed as follows:
"""
Copyright (c) 2020 Node.js contributors. All rights reserved.
Copyright (c) 2009 Google Inc.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN
NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,

SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- inspector_protocol, located at deps/inspector_protocol, is licensed as follows:
"""
// Copyright 2016 The Chromium Authors. All rights reserved.
//
// Redistribution and use in source and binary forms, with or without
// modification, are permitted provided that the following conditions are
// met:
//
//   * Redistributions of source code must retain the above copyright
// notice, this list of conditions and the following
disclaimer.
//   * Redistributions in binary form must reproduce the above
// copyright notice, this list of conditions and the following disclaimer
// in the documentation and/or other materials provided with the
// distribution.
//   * Neither the name of Google Inc. nor the names of its
// contributors may be used to endorse or promote products derived from
// this software without specific prior written permission.
//
// THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
// "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
// LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
// A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
// OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
// SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
// LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,

// DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
// THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
// (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
// OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- jinja2, located at tools/inspector_protocol/jinja2, is licensed as follows:
"""
Copyright (c) 2009 by the Jinja Team, see AUTHORS for more details.

Some rights reserved.

Redistribution and use in source and binary forms, with or without

modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.

* The names of the contributors may not be used to endorse or
promote products derived from this software without specific
prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.
"""

- markupsafe, located at tools/inspector_protocol/markupsafe, is licensed as follows:
"""
Copyright (c) 2010 by Armin Ronacher and contributors. See AUTHORS
for more details.

Some rights reserved.

Redistribution and use in source and binary forms of the software as well
as documentation, with or without modification, are permitted provided
that the following conditions are met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.

* The names of the contributors may not be used to endorse or
promote products derived from this software without specific
prior written permission.

THIS SOFTWARE AND DOCUMENTATION
IS PROVIDED BY THE COPYRIGHT HOLDERS AND
CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT
NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR
PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE AND DOCUMENTATION, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.
"""

- cpplint.py, located at tools/cpplint.py, is licensed as follows:
"""
Copyright (c) 2009 Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with
or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT

(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- gypi_to_gn.py, located at tools/gypi_to_gn.py, is licensed as follows:
"""
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation
and/or other materials provided with the
distribution.
* Neither the name of Google LLC nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE,
EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- gtest, located at deps/googletest, is licensed as follows:
"""
Copyright 2008, Google Inc.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer

in the documentation and/or other materials provided with the
distribution.
    * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- nghttp2, located at deps/nghttp2, is licensed as follows:
"""
The MIT License

Copyright (c) 2012, 2014, 2015, 2016 Tatsuhiro Tsujikawa
Copyright (c) 2012, 2014, 2015, 2016 nghttp2 contributors

Permission is hereby granted, free of charge, to any person obtaining
a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- large_pages, located at src/large_pages, is licensed as follows:
"""

Copyright (C) 2018 Intel Corporation

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom
the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL
THE AUTHORS OR COPYRIGHT HOLDERS
BE LIABLE FOR ANY CLAIM, DAMAGES
OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE
OR OTHER DEALINGS IN THE SOFTWARE.
"""

- caja, located at lib/internal/freeze_intrinsics.js, is licensed as follows:
"""

Adapted from SES/Caja - Copyright (C) 2011 Google Inc.
Copyright (C) 2018 Agoric

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
"""

- brotli, located
at deps/brotli, is licensed as follows:
"""

Copyright (c) 2009, 2010, 2013-2016 by the Brotli Authors.

Permission is hereby granted, free of charge, to any person obtaining a copy

of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.
"""

- zstd, located at deps/zstd, is licensed as follows:
"""
BSD License

For Zstandard software

Copyright (c) Meta Platforms, Inc. and affiliates. All rights reserved.

Redistribution and use in source and binary forms, with or without modification,
are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.

* Neither the name Facebook, nor Meta, nor the names of its contributors may
be used to
endorse or promote products derived from this software without
specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;

LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- HdrHistogram, located at deps/histogram, is licensed as follows:
"""
The code in
this repository code was Written by Gil Tene, Michael Barker,
and Matt Warren, and released to the public domain, as explained at
http://creativecommons.org/publicdomain/zero/1.0/

For users of this code who wish to consume it under the "BSD" license
rather than under the public domain or CC0 contribution text mentioned
above, the code found under this directory is *also* provided under the
following license (commonly referred to as the BSD 2-Clause License). This
license does not detract from the above stated release of the code into
the public domain, and simply represents an additional license granted by
the Author.

** Beginning of "BSD 2-Clause License" text. **

Copyright (c) 2012, 2013, 2014 Gil Tene
Copyright (c) 2014 Michael Barker
Copyright (c) 2014 Matt Warren
All rights reserved.

Redistribution and use in source and binary forms,
with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS;

OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
"""

- node-heapdump, located at src/heap_utils.cc, is licensed as follows:
"""
ISC License

Copyright (c) 2012, Ben Noordhuis <info@bnoordhuis.nl>

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF
USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

=== src/compat.h src/compat-inl.h ===

ISC License

Copyright (c) 2014, StrongLoop Inc.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE
OF THIS SOFTWARE.
"""

- rimraf, located at lib/internal/fs/rimraf.js, is licensed as follows:
"""

The ISC License

Copyright (c) Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
"""

- uvwasi, located at deps/uvwasi, is licensed as follows:
"""
MIT License

Copyright (c) 2019 Colin Ihrig and Contributors

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF
CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
"""

- ngtcp2, located at deps/ngtcp2/ngtcp2/, is licensed as follows:
"""
The MIT License

Copyright (c) 2016 ngtcp2 contributors

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED
TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- nghttp3, located at deps/ngtcp2/nghttp3/, is licensed as follows:
"""
The MIT License

Copyright (c) 2019 nghttp3 contributors

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright
notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- node-fs-extra, located at lib/internal/fs/cp, is licensed as follows:
"""
(The MIT License)

Copyright (c) 2011-2017 JP Richardson

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files
(the 'Software'), to deal in the Software without restriction, including without limitation the rights to use, copy, modify,
merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED 'AS IS', WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS
OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

- on-exit-leak-free, located at lib/internal/process/finalization, is licensed as follows:
"""
MIT License

Copyright (c) 2021 Matteo Collina

Permission is hereby
granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE

AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
"""

MIT License

Copyright (c) 2024 Node.js

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
The ISC License

Copyright (c) 2011-2022 Isaac Z. Schlueter, Ben Noordhuis, and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
This package contains code originally written by Isaac Z. Schlueter.
Used with permission.

Copyright (c) Meryn Stol ("Author")
All rights reserved.

The BSD License

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
UNRECOGNIZED LICENSE; MD5 sum: 1a764bd2bad6848ffc9fd3bca773138d
Copyright (c) 2015, Rebecca Turner

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT,
INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
Copyright (c) silverwind
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
  list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice,
  this list of conditions and the following disclaimer in the documentation
  and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS
OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
MIT License

Copyright (c) 2018 Nikita Skovoroda <chalkerx@gmail.com>

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (c) 2017, Rebecca Turner <me@re-becca.org>

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/safestack.h.in
*
* Copyright 1999-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_SAFESTACK_H
# define OPENSSL_SAFESTACK_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_SAFESTACK_H
# endif

# include <openssl/stack.h>
# include <openssl/e_os2.h>

#ifdef __cplusplus
extern "C" {
#endif

# define STACK_OF(type) struct stack_st_##type

/* Helper macro for internal use */
# define SKM_DEFINE_STACK_OF_INTERNAL(t1, t2, t3) \
  STACK_OF(t1); \
  typedef int (*sk_##t1##_compfunc)(const t3 * const *a, const t3 *const *b); \
  typedef void (*sk_##t1##_freefunc)(t3 *a); \
  typedef t3
 * (*sk_##t1##_copyfunc)(const t3 *a); \
  static ossl_unused ossl_inline t2 *ossl_check_##t1##_type(t2 *ptr) \
  { \
      return ptr; \
  } \
  static ossl_unused ossl_inline const OPENSSL_STACK *ossl_check_const_##t1##_sk_type(const
STACK_OF(t1) *sk) \
  { \
      return (const OPENSSL_STACK *)sk; \
  } \
```

```
  static ossl_unused ossl_inline OPENSSL_STACK *ossl_check_##t1##_sk_type(STACK_OF(t1) *sk) \
  { \
      return (OPENSSL_STACK *)sk; \
  } \
  static ossl_unused ossl_inline OPENSSL_sk_compfunc ossl_check_##t1##_compfunc_type(sk_##t1##_compfunc
cmp) \
  { \
      return (OPENSSL_sk_compfunc)cmp; \
  } \
  static ossl_unused ossl_inline OPENSSL_sk_copyfunc ossl_check_##t1##_copyfunc_type(sk_##t1##_copyfunc
cpy) \
  { \
      return (OPENSSL_sk_copyfunc)cpy; \
  } \
  static ossl_unused ossl_inline OPENSSL_sk_freefunc ossl_check_##t1##_freefunc_type(sk_##t1##_freefunc fr) \
  { \
      return (OPENSSL_sk_freefunc)fr; \
  }

# define SKM_DEFINE_STACK_OF(t1,
 t2, t3) \
  STACK_OF(t1); \
  typedef int (*sk_##t1##_compfunc)(const t3 * const *a, const t3 *const *b); \
  typedef void (*sk_##t1##_freefunc)(t3 *a); \
  typedef t3 * (*sk_##t1##_copyfunc)(const t3 *a); \
  static ossl_unused ossl_inline int sk_##t1##_num(const STACK_OF(t1) *sk) \
  { \
      return OPENSSL_sk_num((const OPENSSL_STACK *)sk); \
  } \
  static ossl_unused ossl_inline t2 *sk_##t1##_value(const STACK_OF(t1) *sk, int idx) \
  { \
      return (t2 *)OPENSSL_sk_value((const OPENSSL_STACK *)sk, idx); \
  } \
  static ossl_unused ossl_inline STACK_OF(t1) *sk_##t1##_new(sk_##t1##_compfunc compare) \
  { \
      return (STACK_OF(t1) *)OPENSSL_sk_new((OPENSSL_sk_compfunc)compare); \
  } \
  static ossl_unused ossl_inline STACK_OF(t1) *sk_##t1##_new_null(void) \
  { \
      return (STACK_OF(t1) *)OPENSSL_sk_new_null(); \
  } \
  static ossl_unused ossl_inline STACK_OF(t1) *sk_##t1##_new_reserve(sk_##t1##_compfunc compare,
 int n) \
  { \
      return (STACK_OF(t1) *)OPENSSL_sk_new_reserve((OPENSSL_sk_compfunc)compare, n); \
  } \
  static ossl_unused ossl_inline int sk_##t1##_reserve(STACK_OF(t1) *sk, int n) \
  { \
```

```
    return OPENSSL_sk_reserve((OPENSSL_STACK *)sk, n); \
} \
static ossl_unused ossl_inline void sk_##t1##_free(STACK_OF(t1) *sk) \
{ \
    OPENSSL_sk_free((OPENSSL_STACK *)sk); \
} \
static ossl_unused ossl_inline void sk_##t1##_zero(STACK_OF(t1) *sk) \
{ \
    OPENSSL_sk_zero((OPENSSL_STACK *)sk); \
} \
static ossl_unused ossl_inline t2 *sk_##t1##_delete(STACK_OF(t1) *sk, int i) \
{ \
    return (t2 *)OPENSSL_sk_delete((OPENSSL_STACK *)sk, i); \
} \
static ossl_unused ossl_inline t2 *sk_##t1##_delete_ptr(STACK_OF(t1) *sk, t2 *ptr) \
{ \
    return (t2 *)OPENSSL_sk_delete_ptr((OPENSSL_STACK *)sk, \
                                       (const void *)ptr); \
} \
static ossl_unused ossl_inline int
sk_##t1##_push(STACK_OF(t1) *sk, t2 *ptr) \
{ \
    return OPENSSL_sk_push((OPENSSL_STACK *)sk, (const void *)ptr); \
} \
static ossl_unused ossl_inline int sk_##t1##_unshift(STACK_OF(t1) *sk, t2 *ptr) \
{ \
    return OPENSSL_sk_unshift((OPENSSL_STACK *)sk, (const void *)ptr); \
} \
static ossl_unused ossl_inline t2 *sk_##t1##_pop(STACK_OF(t1) *sk) \
{ \
    return (t2 *)OPENSSL_sk_pop((OPENSSL_STACK *)sk); \
} \
static ossl_unused ossl_inline t2 *sk_##t1##_shift(STACK_OF(t1) *sk) \
{ \
    return (t2 *)OPENSSL_sk_shift((OPENSSL_STACK *)sk); \
} \
static ossl_unused ossl_inline void sk_##t1##_pop_free(STACK_OF(t1) *sk, sk_##t1##_freefunc freefunc) \
{ \
    OPENSSL_sk_pop_free((OPENSSL_STACK *)sk, (OPENSSL_sk_freefunc)freefunc); \
} \
static ossl_unused ossl_inline int sk_##t1##_insert(STACK_OF(t1) *sk, t2 *ptr, int idx) \
{ \
    return OPENSSL_sk_insert((OPENSSL_STACK *)sk, (const void *)ptr, idx);
\
} \
static ossl_unused ossl_inline t2 *sk_##t1##_set(STACK_OF(t1) *sk, int idx, t2 *ptr) \
{ \
    return (t2 *)OPENSSL_sk_set((OPENSSL_STACK *)sk, idx, (const void *)ptr); \
```

```
  } \
  static ossl_unused ossl_inline int sk_##t1##_find(STACK_OF(t1) *sk, t2 *ptr) \
  { \
     return OPENSSL_sk_find((OPENSSL_STACK *)sk, (const void *)ptr); \
  } \
  static ossl_unused ossl_inline int sk_##t1##_find_ex(STACK_OF(t1) *sk, t2 *ptr) \
  { \
     return OPENSSL_sk_find_ex((OPENSSL_STACK *)sk, (const void *)ptr); \
  } \
  static ossl_unused ossl_inline int sk_##t1##_find_all(STACK_OF(t1) *sk, t2 *ptr, int *pnum) \
  { \
     return OPENSSL_sk_find_all((OPENSSL_STACK *)sk, (const void *)ptr, pnum); \
  } \
  static ossl_unused ossl_inline void sk_##t1##_sort(STACK_OF(t1) *sk) \
  { \
     OPENSSL_sk_sort((OPENSSL_STACK *)sk); \
  } \
  static ossl_unused ossl_inline int sk_##t1##_is_sorted(const STACK_OF(t1) *sk) \
  { \
     return
 OPENSSL_sk_is_sorted((const OPENSSL_STACK *)sk); \
  } \
  static ossl_unused ossl_inline STACK_OF(t1) * sk_##t1##_dup(const STACK_OF(t1) *sk) \
  { \
     return (STACK_OF(t1) *)OPENSSL_sk_dup((const OPENSSL_STACK *)sk); \
  } \
  static ossl_unused ossl_inline STACK_OF(t1) *sk_##t1##_deep_copy(const STACK_OF(t1) *sk, \
                                       sk_##t1##_copyfunc copyfunc, \
                                       sk_##t1##_freefunc freefunc) \
  { \
     return (STACK_OF(t1) *)OPENSSL_sk_deep_copy((const OPENSSL_STACK *)sk, \
                                 (OPENSSL_sk_copyfunc)copyfunc, \
                                 (OPENSSL_sk_freefunc)freefunc); \
  } \
  static ossl_unused ossl_inline sk_##t1##_compfunc sk_##t1##_set_cmp_func(STACK_OF(t1) *sk,
sk_##t1##_compfunc compare) \
  { \
     return (sk_##t1##_compfunc)OPENSSL_sk_set_cmp_func((OPENSSL_STACK *)sk,
(OPENSSL_sk_compfunc)compare); \
    }

# define DEFINE_STACK_OF(t) SKM_DEFINE_STACK_OF(t, t, t)
# define DEFINE_STACK_OF_CONST(t) SKM_DEFINE_STACK_OF(t, const t, t)
# define DEFINE_SPECIAL_STACK_OF(t1, t2) SKM_DEFINE_STACK_OF(t1, t2, t2)
# define DEFINE_SPECIAL_STACK_OF_CONST(t1, t2) \
        SKM_DEFINE_STACK_OF(t1, const t2, t2)

/*-
```

```
* Strings are special: normally an lhash entry will point to a single
* (somewhat) mutable object. In the case of strings:
*
* a) Instead of a single char, there is an array of chars, NUL-terminated.
* b) The string may have be immutable.
*
* So, they need their own declarations. Especially important for
* type-checking tools, such as Deputy.
*
* In practice, however, it appears to be hard to have a const
* string. For now, I'm settling for dealing with the fact it is a
* string at all.
*/
typedef char *OPENSSL_STRING;
typedef const char *OPENSSL_CSTRING;

/*-
* Confusingly, LHASH_OF(STRING) deals with char ** throughout, but
* STACK_OF(STRING) is really more like STACK_OF(char),
 only, as mentioned
* above, instead of a single char each entry is a NUL-terminated array of
* chars. So, we have to implement STRING specially for STACK_OF. This is
* dealt with in the autogenerated macros below.
*/
SKM_DEFINE_STACK_OF_INTERNAL(OPENSSL_STRING, char, char)
#define sk_OPENSSL_STRING_num(sk)
OPENSSL_sk_num(ossl_check_const_OPENSSL_STRING_sk_type(sk))
#define sk_OPENSSL_STRING_value(sk, idx) ((char
*)OPENSSL_sk_value(ossl_check_const_OPENSSL_STRING_sk_type(sk), (idx)))
#define sk_OPENSSL_STRING_new(cmp) ((STACK_OF(OPENSSL_STRING)
*)OPENSSL_sk_new(ossl_check_OPENSSL_STRING_compfunc_type(cmp)))
#define sk_OPENSSL_STRING_new_null() ((STACK_OF(OPENSSL_STRING) *)OPENSSL_sk_new_null())
#define sk_OPENSSL_STRING_new_reserve(cmp, n) ((STACK_OF(OPENSSL_STRING)
*)OPENSSL_sk_new_reserve(ossl_check_OPENSSL_STRING_compfunc_type(cmp), (n)))
#define sk_OPENSSL_STRING_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OPENSSL_STRING_sk_type(sk), (n))
#define sk_OPENSSL_STRING_free(sk)
 OPENSSL_sk_free(ossl_check_OPENSSL_STRING_sk_type(sk))
#define sk_OPENSSL_STRING_zero(sk) OPENSSL_sk_zero(ossl_check_OPENSSL_STRING_sk_type(sk))
#define sk_OPENSSL_STRING_delete(sk, i) ((char
*)OPENSSL_sk_delete(ossl_check_OPENSSL_STRING_sk_type(sk), (i)))
#define sk_OPENSSL_STRING_delete_ptr(sk, ptr) ((char
*)OPENSSL_sk_delete_ptr(ossl_check_OPENSSL_STRING_sk_type(sk),
ossl_check_OPENSSL_STRING_type(ptr)))
#define sk_OPENSSL_STRING_push(sk, ptr) OPENSSL_sk_push(ossl_check_OPENSSL_STRING_sk_type(sk),
ossl_check_OPENSSL_STRING_type(ptr))
#define sk_OPENSSL_STRING_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_OPENSSL_STRING_sk_type(sk), ossl_check_OPENSSL_STRING_type(ptr))
```

#define sk_OPENSSL_STRING_pop(sk) ((char
*)OPENSSL_sk_pop(ossl_check_OPENSSL_STRING_sk_type(sk)))
#define sk_OPENSSL_STRING_shift(sk) ((char
*)OPENSSL_sk_shift(ossl_check_OPENSSL_STRING_sk_type(sk)))
#define sk_OPENSSL_STRING_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OPENSSL_STRING_sk_type(sk),ossl_check_OPENSSL_STRING_freefunc_
type(freefunc))
#define
sk_OPENSSL_STRING_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_OPENSSL_STRING_sk_type(sk),
ossl_check_OPENSSL_STRING_type(ptr), (idx))
#define sk_OPENSSL_STRING_set(sk, idx, ptr) ((char
*)OPENSSL_sk_set(ossl_check_OPENSSL_STRING_sk_type(sk), (idx),
ossl_check_OPENSSL_STRING_type(ptr)))
#define sk_OPENSSL_STRING_find(sk, ptr) OPENSSL_sk_find(ossl_check_OPENSSL_STRING_sk_type(sk),
ossl_check_OPENSSL_STRING_type(ptr))
#define sk_OPENSSL_STRING_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OPENSSL_STRING_sk_type(sk), ossl_check_OPENSSL_STRING_type(ptr))
#define sk_OPENSSL_STRING_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OPENSSL_STRING_sk_type(sk), ossl_check_OPENSSL_STRING_type(ptr),
pnum)
#define sk_OPENSSL_STRING_sort(sk) OPENSSL_sk_sort(ossl_check_OPENSSL_STRING_sk_type(sk))
#define sk_OPENSSL_STRING_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OPENSSL_STRING_sk_type(sk))
#define sk_OPENSSL_STRING_dup(sk)
((STACK_OF(OPENSSL_STRING) *)OPENSSL_sk_dup(ossl_check_const_OPENSSL_STRING_sk_type(sk)))
#define sk_OPENSSL_STRING_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OPENSSL_STRING)
*)OPENSSL_sk_deep_copy(ossl_check_const_OPENSSL_STRING_sk_type(sk),
ossl_check_OPENSSL_STRING_copyfunc_type(copyfunc),
ossl_check_OPENSSL_STRING_freefunc_type(freefunc)))
#define sk_OPENSSL_STRING_set_cmp_func(sk, cmp)
((sk_OPENSSL_STRING_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OPENSSL_STRING_sk_type(sk),
ossl_check_OPENSSL_STRING_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(OPENSSL_CSTRING, const char, char)
#define sk_OPENSSL_CSTRING_num(sk)
OPENSSL_sk_num(ossl_check_const_OPENSSL_CSTRING_sk_type(sk))
#define sk_OPENSSL_CSTRING_value(sk, idx) ((const char
*)OPENSSL_sk_value(ossl_check_const_OPENSSL_CSTRING_sk_type(sk), (idx)))
#define sk_OPENSSL_CSTRING_new(cmp) ((STACK_OF(OPENSSL_CSTRING)
*)OPENSSL_sk_new(ossl_check_OPENSSL_CSTRING_compfunc_type(cmp)))
#define sk_OPENSSL_CSTRING_new_null() ((STACK_OF(OPENSSL_CSTRING)
*)OPENSSL_sk_new_null())
#define sk_OPENSSL_CSTRING_new_reserve(cmp, n) ((STACK_OF(OPENSSL_CSTRING)
*)OPENSSL_sk_new_reserve(ossl_check_OPENSSL_CSTRING_compfunc_type(cmp), (n)))
#define sk_OPENSSL_CSTRING_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OPENSSL_CSTRING_sk_type(sk), (n))
#define sk_OPENSSL_CSTRING_free(sk) OPENSSL_sk_free(ossl_check_OPENSSL_CSTRING_sk_type(sk))
#define sk_OPENSSL_CSTRING_zero(sk) OPENSSL_sk_zero(ossl_check_OPENSSL_CSTRING_sk_type(sk))
#define sk_OPENSSL_CSTRING_delete(sk, i) ((const char

*)OPENSSL_sk_delete(ossl_check_OPENSSL_CSTRING_sk_type(sk), (i)))
#define sk_OPENSSL_CSTRING_delete_ptr(sk, ptr) ((const char
*)OPENSSL_sk_delete_ptr(ossl_check_OPENSSL_CSTRING_sk_type(sk),
ossl_check_OPENSSL_CSTRING_type(ptr)))
#define sk_OPENSSL_CSTRING_push(sk, ptr)
OPENSSL_sk_push(ossl_check_OPENSSL_CSTRING_sk_type(sk), ossl_check_OPENSSL_CSTRING_type(ptr))
#define sk_OPENSSL_CSTRING_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_OPENSSL_CSTRING_sk_type(sk),
ossl_check_OPENSSL_CSTRING_type(ptr))
#define sk_OPENSSL_CSTRING_pop(sk) ((const char
*)OPENSSL_sk_pop(ossl_check_OPENSSL_CSTRING_sk_type(sk)))
#define sk_OPENSSL_CSTRING_shift(sk) ((const char
*)OPENSSL_sk_shift(ossl_check_OPENSSL_CSTRING_sk_type(sk)))
#define sk_OPENSSL_CSTRING_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OPENSSL_CSTRING_sk_type(sk),ossl_check_OPENSSL_CSTRING_freefunc_type(freefunc))
#define sk_OPENSSL_CSTRING_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OPENSSL_CSTRING_sk_type(sk), ossl_check_OPENSSL_CSTRING_type(ptr), (idx))
#define sk_OPENSSL_CSTRING_set(sk, idx, ptr) ((const char
*)OPENSSL_sk_set(ossl_check_OPENSSL_CSTRING_sk_type(sk), (idx),
ossl_check_OPENSSL_CSTRING_type(ptr)))
#define sk_OPENSSL_CSTRING_find(sk, ptr)
OPENSSL_sk_find(ossl_check_OPENSSL_CSTRING_sk_type(sk), ossl_check_OPENSSL_CSTRING_type(ptr))
#define sk_OPENSSL_CSTRING_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OPENSSL_CSTRING_sk_type(sk),
ossl_check_OPENSSL_CSTRING_type(ptr))
#define
sk_OPENSSL_CSTRING_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OPENSSL_CSTRING_sk_type(sk),
ossl_check_OPENSSL_CSTRING_type(ptr), pnum)
#define sk_OPENSSL_CSTRING_sort(sk) OPENSSL_sk_sort(ossl_check_OPENSSL_CSTRING_sk_type(sk))
#define sk_OPENSSL_CSTRING_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OPENSSL_CSTRING_sk_type(sk))
#define sk_OPENSSL_CSTRING_dup(sk) ((STACK_OF(OPENSSL_CSTRING)
*)OPENSSL_sk_dup(ossl_check_const_OPENSSL_CSTRING_sk_type(sk)))
#define sk_OPENSSL_CSTRING_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OPENSSL_CSTRING)
*)OPENSSL_sk_deep_copy(ossl_check_const_OPENSSL_CSTRING_sk_type(sk),
ossl_check_OPENSSL_CSTRING_copyfunc_type(copyfunc),
ossl_check_OPENSSL_CSTRING_freefunc_type(freefunc)))
#define sk_OPENSSL_CSTRING_set_cmp_func(sk, cmp)
((sk_OPENSSL_CSTRING_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OPENSSL_CSTRING_sk_type(sk), ossl_check_OPENSSL_CSTRING_compfunc_type(cmp)))

#if !defined(OPENSSL_NO_DEPRECATED_3_0)
/*
* This

```
 is not used by OpenSSL.  A block of bytes,  NOT nul-terminated.
* These should also be distinguished from "normal" stacks.
*/
typedef void *OPENSSL_BLOCK;
SKM_DEFINE_STACK_OF_INTERNAL(OPENSSL_BLOCK, void, void)
#define sk_OPENSSL_BLOCK_num(sk) OPENSSL_sk_num(ossl_check_const_OPENSSL_BLOCK_sk_type(sk))
#define sk_OPENSSL_BLOCK_value(sk, idx) ((void
*)OPENSSL_sk_value(ossl_check_const_OPENSSL_BLOCK_sk_type(sk), (idx)))
#define sk_OPENSSL_BLOCK_new(cmp) ((STACK_OF(OPENSSL_BLOCK)
*)OPENSSL_sk_new(ossl_check_OPENSSL_BLOCK_compfunc_type(cmp)))
#define sk_OPENSSL_BLOCK_new_null() ((STACK_OF(OPENSSL_BLOCK) *)OPENSSL_sk_new_null())
#define sk_OPENSSL_BLOCK_new_reserve(cmp, n) ((STACK_OF(OPENSSL_BLOCK)
*)OPENSSL_sk_new_reserve(ossl_check_OPENSSL_BLOCK_compfunc_type(cmp), (n)))
#define sk_OPENSSL_BLOCK_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OPENSSL_BLOCK_sk_type(sk), (n))
#define sk_OPENSSL_BLOCK_free(sk) OPENSSL_sk_free(ossl_check_OPENSSL_BLOCK_sk_type(sk))
#define sk_OPENSSL_BLOCK_zero(sk)
 OPENSSL_sk_zero(ossl_check_OPENSSL_BLOCK_sk_type(sk))
#define sk_OPENSSL_BLOCK_delete(sk, i) ((void
*)OPENSSL_sk_delete(ossl_check_OPENSSL_BLOCK_sk_type(sk), (i)))
#define sk_OPENSSL_BLOCK_delete_ptr(sk, ptr) ((void
*)OPENSSL_sk_delete_ptr(ossl_check_OPENSSL_BLOCK_sk_type(sk),
ossl_check_OPENSSL_BLOCK_type(ptr)))
#define sk_OPENSSL_BLOCK_push(sk, ptr) OPENSSL_sk_push(ossl_check_OPENSSL_BLOCK_sk_type(sk),
ossl_check_OPENSSL_BLOCK_type(ptr))
#define sk_OPENSSL_BLOCK_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_OPENSSL_BLOCK_sk_type(sk), ossl_check_OPENSSL_BLOCK_type(ptr))
#define sk_OPENSSL_BLOCK_pop(sk) ((void
*)OPENSSL_sk_pop(ossl_check_OPENSSL_BLOCK_sk_type(sk)))
#define sk_OPENSSL_BLOCK_shift(sk) ((void
*)OPENSSL_sk_shift(ossl_check_OPENSSL_BLOCK_sk_type(sk)))
#define sk_OPENSSL_BLOCK_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OPENSSL_BLOCK_sk_type(sk),ossl_check_OPENSSL_BLOCK_freefunc_t
ype(freefunc))
#define sk_OPENSSL_BLOCK_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OPENSSL_BLOCK_sk_type(sk),
 ossl_check_OPENSSL_BLOCK_type(ptr), (idx))
#define sk_OPENSSL_BLOCK_set(sk, idx, ptr) ((void
*)OPENSSL_sk_set(ossl_check_OPENSSL_BLOCK_sk_type(sk), (idx),
ossl_check_OPENSSL_BLOCK_type(ptr)))
#define sk_OPENSSL_BLOCK_find(sk, ptr) OPENSSL_sk_find(ossl_check_OPENSSL_BLOCK_sk_type(sk),
ossl_check_OPENSSL_BLOCK_type(ptr))
#define sk_OPENSSL_BLOCK_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OPENSSL_BLOCK_sk_type(sk), ossl_check_OPENSSL_BLOCK_type(ptr))
#define sk_OPENSSL_BLOCK_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OPENSSL_BLOCK_sk_type(sk), ossl_check_OPENSSL_BLOCK_type(ptr),
pnum)
#define sk_OPENSSL_BLOCK_sort(sk) OPENSSL_sk_sort(ossl_check_OPENSSL_BLOCK_sk_type(sk))
```

#define sk_OPENSSL_BLOCK_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OPENSSL_BLOCK_sk_type(sk))
#define sk_OPENSSL_BLOCK_dup(sk) ((STACK_OF(OPENSSL_BLOCK)
*)OPENSSL_sk_dup(ossl_check_const_OPENSSL_BLOCK_sk_type(sk)))
#define sk_OPENSSL_BLOCK_deep_copy(sk, copyfunc,
freefunc) ((STACK_OF(OPENSSL_BLOCK)
*)OPENSSL_sk_deep_copy(ossl_check_const_OPENSSL_BLOCK_sk_type(sk),
ossl_check_OPENSSL_BLOCK_copyfunc_type(copyfunc),
ossl_check_OPENSSL_BLOCK_freefunc_type(freefunc)))
#define sk_OPENSSL_BLOCK_set_cmp_func(sk, cmp)
((sk_OPENSSL_BLOCK_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OPENSSL_BLOCK_sk_type(sk),
ossl_check_OPENSSL_BLOCK_compfunc_type(cmp)))

#endif

ifdef __cplusplus
}
endif
#endif
Copyright (c) 2020 Node.js contributors. All rights reserved.
Copyright (c) 2009 Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The ISC License

Copyright (c) 2019-2023 Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
The ISC License

Copyright (c) 2016-2022 Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
```
{
 'variables': {
   'openssl_defines_BSD-x86': [
     'NDEBUG',
     'L_ENDIAN',
     'OPENSSL_BUILDING_OPENSSL',
     'AES_ASM',
     'CMLL_ASM',
     'DES_ASM',
     'ECP_NISTZ256_ASM',
     'GHASH_ASM',
     'MD5_ASM',
     'OPENSSL_BN_ASM_GF2m',
     'OPENSSL_BN_ASM_MONT',
     'OPENSSL_BN_ASM_PART_WORDS',
     'OPENSSL_CPUID_OBJ',
     'OPENSSL_IA32_SSE2',
     'PADLOCK_ASM',
```

```
  'POLY1305_ASM',
  'RC4_ASM',
  'RMD160_ASM',
  'SHA1_ASM',
  'SHA256_ASM',
  'SHA512_ASM',
  'VPAES_ASM',
  'WHIRLPOOL_ASM',
  'OPENSSL_PIC',
 ],
 'openssl_cflags_BSD-x86': [
  '-Wa,--noexecstack',
  '-Wall -O3 -fomit-frame-pointer',
  '-pthread',
  '-Wall -O3 -fomit-frame-pointer',
 ],
 'openssl_ex_libs_BSD-x86': [
  '-pthread',
 ],
 'openssl_cli_srcs_BSD-x86': [
  'openssl/apps/lib/cmp_mock_srv.c',
  'openssl/apps/asn1parse.c',
  'openssl/apps/ca.c',
  'openssl/apps/ciphers.c',
  'openssl/apps/cmp.c',
   'openssl/apps/cms.c',
  'openssl/apps/crl.c',
  'openssl/apps/crl2pkcs7.c',
  'openssl/apps/dgst.c',
  'openssl/apps/dhparam.c',
  'openssl/apps/dsa.c',
  'openssl/apps/dsaparam.c',
  'openssl/apps/ec.c',
  'openssl/apps/ecparam.c',
  'openssl/apps/enc.c',
  'openssl/apps/engine.c',
  'openssl/apps/errstr.c',
  'openssl/apps/fipsinstall.c',
  'openssl/apps/gendsa.c',
  'openssl/apps/genpkey.c',
  'openssl/apps/genrsa.c',
  'openssl/apps/info.c',
  'openssl/apps/kdf.c',
  'openssl/apps/list.c',
  'openssl/apps/mac.c',
  'openssl/apps/nseq.c',
  'openssl/apps/ocsp.c',
  'openssl/apps/openssl.c',
```

```
    'openssl/apps/passwd.c',
    'openssl/apps/pkcs12.c',
    'openssl/apps/pkcs7.c',
    'openssl/apps/pkcs8.c',
    'openssl/apps/pkey.c',
    'openssl/apps/pkeyparam.c',
    'openssl/apps/pkeyutl.c',
    'openssl/apps/prime.c',
    './config/archs/BSD-x86/asm/apps/progs.c',

   'openssl/apps/rand.c',
    'openssl/apps/rehash.c',
    'openssl/apps/req.c',
    'openssl/apps/rsa.c',
    'openssl/apps/rsautl.c',
    'openssl/apps/s_client.c',
    'openssl/apps/s_server.c',
    'openssl/apps/s_time.c',
    'openssl/apps/sess_id.c',
    'openssl/apps/smime.c',
    'openssl/apps/speed.c',
    'openssl/apps/spkac.c',
    'openssl/apps/srp.c',
    'openssl/apps/storeutl.c',
    'openssl/apps/ts.c',
    'openssl/apps/verify.c',
    'openssl/apps/version.c',
    'openssl/apps/x509.c',
    'openssl/apps/lib/app_libctx.c',
    'openssl/apps/lib/app_params.c',
    'openssl/apps/lib/app_provider.c',
    'openssl/apps/lib/app_rand.c',
    'openssl/apps/lib/app_x509.c',
    'openssl/apps/lib/apps.c',
    'openssl/apps/lib/apps_ui.c',
    'openssl/apps/lib/columns.c',
    'openssl/apps/lib/engine.c',
    'openssl/apps/lib/engine_loader.c',
    'openssl/apps/lib/fmt.c',
    'openssl/apps/lib/http_server.c',
    'openssl/apps/lib/names.c',
     'openssl/apps/lib/opt.c',
    'openssl/apps/lib/s_cb.c',
    'openssl/apps/lib/s_socket.c',
    'openssl/apps/lib/tlssrp_depr.c',
  ],
},
'defines': ['<@(openssl_defines_BSD-x86)'],
```

```
 'include_dirs': [
   './include',
 ],
 'cflags' : ['<@(openssl_cflags_BSD-x86)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86)'],
 'sources': ['<@(openssl_cli_srcs_BSD-x86)'],
}
/*-
* WARNING: do not edit!
* Generated by Makefile from include/openssl/crmf.h.in
*
* Copyright 2007-2021 The OpenSSL Project Authors. All Rights Reserved.
* Copyright Nokia 2007-2019
* Copyright Siemens AG 2015-2019
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*
* CRMF (RFC 4211) implementation by M. Peylo, M. Viljanen, and D. von Oheimb.
*/



#ifndef OPENSSL_CRMF_H
# define OPENSSL_CRMF_H

# include <openssl/opensslconf.h>

# ifndef OPENSSL_NO_CRMF
#  include <openssl/opensslv.h>
#  include <openssl/safestack.h>
#  include <openssl/crmferr.h>
#  include <openssl/x509v3.h> /* for GENERAL_NAME etc. */

/* explicit #includes not strictly needed since implied by the above: */
#  include <openssl/types.h>
#  include <openssl/x509.h>

#  ifdef __cplusplus
extern "C" {
#  endif

#
  define OSSL_CRMF_POPOPRIVKEY_THISMESSAGE         0
#  define OSSL_CRMF_POPOPRIVKEY_SUBSEQUENTMESSAGE    1
#  define OSSL_CRMF_POPOPRIVKEY_DHMAC              2
```

```
# define OSSL_CRMF_POPOPRIVKEY_AGREEMAC           3
# define OSSL_CRMF_POPOPRIVKEY_ENCRYPTEDKEY       4

# define OSSL_CRMF_SUBSEQUENTMESSAGE_ENCRCERT      0
# define OSSL_CRMF_SUBSEQUENTMESSAGE_CHALLENGERESP 1

typedef struct ossl_crmf_encryptedvalue_st OSSL_CRMF_ENCRYPTEDVALUE;
DECLARE_ASN1_FUNCTIONS(OSSL_CRMF_ENCRYPTEDVALUE)
typedef struct ossl_crmf_msg_st OSSL_CRMF_MSG;
DECLARE_ASN1_FUNCTIONS(OSSL_CRMF_MSG)
DECLARE_ASN1_DUP_FUNCTION(OSSL_CRMF_MSG)
SKM_DEFINE_STACK_OF_INTERNAL(OSSL_CRMF_MSG, OSSL_CRMF_MSG, OSSL_CRMF_MSG)
#define sk_OSSL_CRMF_MSG_num(sk)
OPENSSL_sk_num(ossl_check_const_OSSL_CRMF_MSG_sk_type(sk))
#define sk_OSSL_CRMF_MSG_value(sk, idx) ((OSSL_CRMF_MSG
*)OPENSSL_sk_value(ossl_check_const_OSSL_CRMF_MSG_sk_type(sk), (idx)))
#define sk_OSSL_CRMF_MSG_new(cmp) ((STACK_OF(OSSL_CRMF_MSG)
*)OPENSSL_sk_new(ossl_check_OSSL_CRMF_MSG_compfunc_type(cmp)))
#define
 sk_OSSL_CRMF_MSG_new_null() ((STACK_OF(OSSL_CRMF_MSG) *)OPENSSL_sk_new_null())
#define sk_OSSL_CRMF_MSG_new_reserve(cmp, n) ((STACK_OF(OSSL_CRMF_MSG)
*)OPENSSL_sk_new_reserve(ossl_check_OSSL_CRMF_MSG_compfunc_type(cmp), (n)))
#define sk_OSSL_CRMF_MSG_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OSSL_CRMF_MSG_sk_type(sk), (n))
#define sk_OSSL_CRMF_MSG_free(sk) OPENSSL_sk_free(ossl_check_OSSL_CRMF_MSG_sk_type(sk))
#define sk_OSSL_CRMF_MSG_zero(sk) OPENSSL_sk_zero(ossl_check_OSSL_CRMF_MSG_sk_type(sk))
#define sk_OSSL_CRMF_MSG_delete(sk, i) ((OSSL_CRMF_MSG
*)OPENSSL_sk_delete(ossl_check_OSSL_CRMF_MSG_sk_type(sk), (i)))
#define sk_OSSL_CRMF_MSG_delete_ptr(sk, ptr) ((OSSL_CRMF_MSG
*)OPENSSL_sk_delete_ptr(ossl_check_OSSL_CRMF_MSG_sk_type(sk),
ossl_check_OSSL_CRMF_MSG_type(ptr)))
#define sk_OSSL_CRMF_MSG_push(sk, ptr) OPENSSL_sk_push(ossl_check_OSSL_CRMF_MSG_sk_type(sk),
ossl_check_OSSL_CRMF_MSG_type(ptr))
#define sk_OSSL_CRMF_MSG_unshift(sk,
 ptr) OPENSSL_sk_unshift(ossl_check_OSSL_CRMF_MSG_sk_type(sk),
ossl_check_OSSL_CRMF_MSG_type(ptr))
#define sk_OSSL_CRMF_MSG_pop(sk) ((OSSL_CRMF_MSG
*)OPENSSL_sk_pop(ossl_check_OSSL_CRMF_MSG_sk_type(sk)))
#define sk_OSSL_CRMF_MSG_shift(sk) ((OSSL_CRMF_MSG
*)OPENSSL_sk_shift(ossl_check_OSSL_CRMF_MSG_sk_type(sk)))
#define sk_OSSL_CRMF_MSG_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OSSL_CRMF_MSG_sk_type(sk),ossl_check_OSSL_CRMF_MSG_freefunc_t
ype(freefunc))
#define sk_OSSL_CRMF_MSG_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OSSL_CRMF_MSG_sk_type(sk), ossl_check_OSSL_CRMF_MSG_type(ptr),
(idx))
#define sk_OSSL_CRMF_MSG_set(sk, idx, ptr) ((OSSL_CRMF_MSG
*)OPENSSL_sk_set(ossl_check_OSSL_CRMF_MSG_sk_type(sk), (idx),
```

```
ossl_check_OSSL_CRMF_MSG_type(ptr)))
#define sk_OSSL_CRMF_MSG_find(sk, ptr) OPENSSL_sk_find(ossl_check_OSSL_CRMF_MSG_sk_type(sk),
ossl_check_OSSL_CRMF_MSG_type(ptr))
#define sk_OSSL_CRMF_MSG_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OSSL_CRMF_MSG_sk_type(sk),
 ossl_check_OSSL_CRMF_MSG_type(ptr))
#define sk_OSSL_CRMF_MSG_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_OSSL_CRMF_MSG_sk_type(sk), ossl_check_OSSL_CRMF_MSG_type(ptr),
pnum)
#define sk_OSSL_CRMF_MSG_sort(sk) OPENSSL_sk_sort(ossl_check_OSSL_CRMF_MSG_sk_type(sk))
#define sk_OSSL_CRMF_MSG_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OSSL_CRMF_MSG_sk_type(sk))
#define sk_OSSL_CRMF_MSG_dup(sk) ((STACK_OF(OSSL_CRMF_MSG)
*)OPENSSL_sk_dup(ossl_check_const_OSSL_CRMF_MSG_sk_type(sk)))
#define sk_OSSL_CRMF_MSG_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OSSL_CRMF_MSG)
*)OPENSSL_sk_deep_copy(ossl_check_const_OSSL_CRMF_MSG_sk_type(sk),
ossl_check_OSSL_CRMF_MSG_copyfunc_type(copyfunc),
ossl_check_OSSL_CRMF_MSG_freefunc_type(freefunc)))
#define sk_OSSL_CRMF_MSG_set_cmp_func(sk, cmp)
((sk_OSSL_CRMF_MSG_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OSSL_CRMF_MSG_sk_type(sk),
ossl_check_OSSL_CRMF_MSG_compfunc_type(cmp)))

typedef struct ossl_crmf_attributetypeandvalue_st OSSL_CRMF_ATTRIBUTETYPEANDVALUE;
typedef
 struct ossl_crmf_pbmparameter_st OSSL_CRMF_PBMPARAMETER;
DECLARE_ASN1_FUNCTIONS(OSSL_CRMF_PBMPARAMETER)
typedef struct ossl_crmf_poposigningkey_st OSSL_CRMF_POPOSIGNINGKEY;
typedef struct ossl_crmf_certrequest_st OSSL_CRMF_CERTREQUEST;
typedef struct ossl_crmf_certid_st OSSL_CRMF_CERTID;
DECLARE_ASN1_FUNCTIONS(OSSL_CRMF_CERTID)
DECLARE_ASN1_DUP_FUNCTION(OSSL_CRMF_CERTID)
SKM_DEFINE_STACK_OF_INTERNAL(OSSL_CRMF_CERTID, OSSL_CRMF_CERTID,
OSSL_CRMF_CERTID)
#define sk_OSSL_CRMF_CERTID_num(sk)
OPENSSL_sk_num(ossl_check_const_OSSL_CRMF_CERTID_sk_type(sk))
#define sk_OSSL_CRMF_CERTID_value(sk, idx) ((OSSL_CRMF_CERTID
*)OPENSSL_sk_value(ossl_check_const_OSSL_CRMF_CERTID_sk_type(sk), (idx)))
#define sk_OSSL_CRMF_CERTID_new(cmp) ((STACK_OF(OSSL_CRMF_CERTID)
*)OPENSSL_sk_new(ossl_check_OSSL_CRMF_CERTID_compfunc_type(cmp)))
#define sk_OSSL_CRMF_CERTID_new_null() ((STACK_OF(OSSL_CRMF_CERTID)
*)OPENSSL_sk_new_null())
#define sk_OSSL_CRMF_CERTID_new_reserve(cmp, n) ((STACK_OF(OSSL_CRMF_CERTID)
 *)OPENSSL_sk_new_reserve(ossl_check_OSSL_CRMF_CERTID_compfunc_type(cmp), (n)))
#define sk_OSSL_CRMF_CERTID_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_OSSL_CRMF_CERTID_sk_type(sk), (n))
#define sk_OSSL_CRMF_CERTID_free(sk) OPENSSL_sk_free(ossl_check_OSSL_CRMF_CERTID_sk_type(sk))
#define sk_OSSL_CRMF_CERTID_zero(sk)
OPENSSL_sk_zero(ossl_check_OSSL_CRMF_CERTID_sk_type(sk))
```

#define sk_OSSL_CRMF_CERTID_delete(sk, i) ((OSSL_CRMF_CERTID
*)OPENSSL_sk_delete(ossl_check_OSSL_CRMF_CERTID_sk_type(sk), (i)))
#define sk_OSSL_CRMF_CERTID_delete_ptr(sk, ptr) ((OSSL_CRMF_CERTID
*)OPENSSL_sk_delete_ptr(ossl_check_OSSL_CRMF_CERTID_sk_type(sk),
ossl_check_OSSL_CRMF_CERTID_type(ptr)))
#define sk_OSSL_CRMF_CERTID_push(sk, ptr)
OPENSSL_sk_push(ossl_check_OSSL_CRMF_CERTID_sk_type(sk),
ossl_check_OSSL_CRMF_CERTID_type(ptr))
#define sk_OSSL_CRMF_CERTID_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_OSSL_CRMF_CERTID_sk_type(sk),
ossl_check_OSSL_CRMF_CERTID_type(ptr))
#define sk_OSSL_CRMF_CERTID_pop(sk)
((OSSL_CRMF_CERTID *)OPENSSL_sk_pop(ossl_check_OSSL_CRMF_CERTID_sk_type(sk)))
#define sk_OSSL_CRMF_CERTID_shift(sk) ((OSSL_CRMF_CERTID
*)OPENSSL_sk_shift(ossl_check_OSSL_CRMF_CERTID_sk_type(sk)))
#define sk_OSSL_CRMF_CERTID_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_OSSL_CRMF_CERTID_sk_type(sk),ossl_check_OSSL_CRMF_CERTID_fre
efunc_type(freefunc))
#define sk_OSSL_CRMF_CERTID_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_OSSL_CRMF_CERTID_sk_type(sk),
ossl_check_OSSL_CRMF_CERTID_type(ptr), (idx))
#define sk_OSSL_CRMF_CERTID_set(sk, idx, ptr) ((OSSL_CRMF_CERTID
*)OPENSSL_sk_set(ossl_check_OSSL_CRMF_CERTID_sk_type(sk), (idx),
ossl_check_OSSL_CRMF_CERTID_type(ptr)))
#define sk_OSSL_CRMF_CERTID_find(sk, ptr)
OPENSSL_sk_find(ossl_check_OSSL_CRMF_CERTID_sk_type(sk),
ossl_check_OSSL_CRMF_CERTID_type(ptr))
#define sk_OSSL_CRMF_CERTID_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_OSSL_CRMF_CERTID_sk_type(sk),
ossl_check_OSSL_CRMF_CERTID_type(ptr))
#define sk_OSSL_CRMF_CERTID_find_all(sk,
ptr, pnum) OPENSSL_sk_find_all(ossl_check_OSSL_CRMF_CERTID_sk_type(sk),
ossl_check_OSSL_CRMF_CERTID_type(ptr), pnum)
#define sk_OSSL_CRMF_CERTID_sort(sk) OPENSSL_sk_sort(ossl_check_OSSL_CRMF_CERTID_sk_type(sk))
#define sk_OSSL_CRMF_CERTID_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_OSSL_CRMF_CERTID_sk_type(sk))
#define sk_OSSL_CRMF_CERTID_dup(sk) ((STACK_OF(OSSL_CRMF_CERTID)
*)OPENSSL_sk_dup(ossl_check_const_OSSL_CRMF_CERTID_sk_type(sk)))
#define sk_OSSL_CRMF_CERTID_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(OSSL_CRMF_CERTID)
*)OPENSSL_sk_deep_copy(ossl_check_const_OSSL_CRMF_CERTID_sk_type(sk),
ossl_check_OSSL_CRMF_CERTID_copyfunc_type(copyfunc),
ossl_check_OSSL_CRMF_CERTID_freefunc_type(freefunc)))
#define sk_OSSL_CRMF_CERTID_set_cmp_func(sk, cmp)
((sk_OSSL_CRMF_CERTID_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_OSSL_CRMF_CERTID_sk_typ
e(sk), ossl_check_OSSL_CRMF_CERTID_compfunc_type(cmp)))

typedef struct ossl_crmf_pkipublicationinfo_st OSSL_CRMF_PKIPUBLICATIONINFO;

```
DECLARE_ASN1_FUNCTIONS(OSSL_CRMF_PKIPUBLICATIONINFO)
typedef
 struct ossl_crmf_singlepubinfo_st OSSL_CRMF_SINGLEPUBINFO;
DECLARE_ASN1_FUNCTIONS(OSSL_CRMF_SINGLEPUBINFO)
typedef struct ossl_crmf_certtemplate_st OSSL_CRMF_CERTTEMPLATE;
DECLARE_ASN1_FUNCTIONS(OSSL_CRMF_CERTTEMPLATE)
typedef STACK_OF(OSSL_CRMF_MSG) OSSL_CRMF_MSGS;
DECLARE_ASN1_FUNCTIONS(OSSL_CRMF_MSGS)

typedef struct ossl_crmf_optionalvalidity_st OSSL_CRMF_OPTIONALVALIDITY;

/* crmf_pbm.c */
OSSL_CRMF_PBMPARAMETER *OSSL_CRMF_pbmp_new(OSSL_LIB_CTX *libctx, size_t slen,
                                           int owfnid, size_t itercnt,
                                           int macnid);
int OSSL_CRMF_pbm_new(OSSL_LIB_CTX *libctx, const char *propq,
                      const OSSL_CRMF_PBMPARAMETER *pbmp,
                      const unsigned char *msg, size_t msglen,
                      const unsigned char *sec, size_t seclen,
                      unsigned char **mac, size_t *maclen);

/* crmf_lib.c
 */
int OSSL_CRMF_MSG_set1_regCtrl_regToken(OSSL_CRMF_MSG *msg,
                                        const ASN1_UTF8STRING *tok);
ASN1_UTF8STRING
*OSSL_CRMF_MSG_get0_regCtrl_regToken(const OSSL_CRMF_MSG *msg);
int OSSL_CRMF_MSG_set1_regCtrl_authenticator(OSSL_CRMF_MSG *msg,
                                             const ASN1_UTF8STRING *auth);
ASN1_UTF8STRING
*OSSL_CRMF_MSG_get0_regCtrl_authenticator(const OSSL_CRMF_MSG *msg);
int
OSSL_CRMF_MSG_PKIPublicationInfo_push0_SinglePubInfo(OSSL_CRMF_PKIPUBLICATIONINFO *pi,
                                                     OSSL_CRMF_SINGLEPUBINFO *spi);
#  define OSSL_CRMF_PUB_METHOD_DONTCARE 0
#  define OSSL_CRMF_PUB_METHOD_X500     1
#  define OSSL_CRMF_PUB_METHOD_WEB      2
#  define OSSL_CRMF_PUB_METHOD_LDAP     3
int OSSL_CRMF_MSG_set0_SinglePubInfo(OSSL_CRMF_SINGLEPUBINFO *spi,
                                     int method, GENERAL_NAME *nm);
#  define OSSL_CRMF_PUB_ACTION_DONTPUBLISH   0
#  define OSSL_CRMF_PUB_ACTION_PLEASEPUBLISH
 1
int OSSL_CRMF_MSG_set_PKIPublicationInfo_action(OSSL_CRMF_PKIPUBLICATIONINFO *pi,
                                                int action);
int OSSL_CRMF_MSG_set1_regCtrl_pkiPublicationInfo(OSSL_CRMF_MSG *msg,
                                                  const OSSL_CRMF_PKIPUBLICATIONINFO *pi);
OSSL_CRMF_PKIPUBLICATIONINFO
```

```
*OSSL_CRMF_MSG_get0_regCtrl_pkiPublicationInfo(const OSSL_CRMF_MSG *msg);
int OSSL_CRMF_MSG_set1_regCtrl_protocolEncrKey(OSSL_CRMF_MSG *msg,
                                const X509_PUBKEY *pubkey);
X509_PUBKEY
*OSSL_CRMF_MSG_get0_regCtrl_protocolEncrKey(const OSSL_CRMF_MSG *msg);
int OSSL_CRMF_MSG_set1_regCtrl_oldCertID(OSSL_CRMF_MSG *msg,
                              const OSSL_CRMF_CERTID *cid);
OSSL_CRMF_CERTID
*OSSL_CRMF_MSG_get0_regCtrl_oldCertID(const OSSL_CRMF_MSG *msg);
OSSL_CRMF_CERTID *OSSL_CRMF_CERTID_gen(const X509_NAME *issuer,
                             const ASN1_INTEGER *serial);

int OSSL_CRMF_MSG_set1_regInfo_utf8Pairs(OSSL_CRMF_MSG
 *msg,
                              const ASN1_UTF8STRING *utf8pairs);
ASN1_UTF8STRING
*OSSL_CRMF_MSG_get0_regInfo_utf8Pairs(const OSSL_CRMF_MSG *msg);
int OSSL_CRMF_MSG_set1_regInfo_certReq(OSSL_CRMF_MSG *msg,
                             const OSSL_CRMF_CERTREQUEST *cr);
OSSL_CRMF_CERTREQUEST
*OSSL_CRMF_MSG_get0_regInfo_certReq(const OSSL_CRMF_MSG *msg);

int OSSL_CRMF_MSG_set0_validity(OSSL_CRMF_MSG *crm,
                         ASN1_TIME *notBefore, ASN1_TIME *notAfter);
int OSSL_CRMF_MSG_set_certReqId(OSSL_CRMF_MSG *crm, int rid);
int OSSL_CRMF_MSG_get_certReqId(const OSSL_CRMF_MSG *crm);
int OSSL_CRMF_MSG_set0_extensions(OSSL_CRMF_MSG *crm, X509_EXTENSIONS *exts);

int OSSL_CRMF_MSG_push0_extension(OSSL_CRMF_MSG *crm, X509_EXTENSION *ext);
#  define OSSL_CRMF_POPO_NONE       -1
#  define OSSL_CRMF_POPO_RAVERIFIED 0
#  define OSSL_CRMF_POPO_SIGNATURE  1
#  define OSSL_CRMF_POPO_KEYENC     2
#  define OSSL_CRMF_POPO_KEYAGREE
  3
int OSSL_CRMF_MSG_create_popo(int meth, OSSL_CRMF_MSG *crm,
                        EVP_PKEY *pkey, const EVP_MD *digest,
                        OSSL_LIB_CTX *libctx, const char *propq);
int OSSL_CRMF_MSGS_verify_popo(const OSSL_CRMF_MSGS *reqs,
                         int rid, int acceptRAVerified,
                         OSSL_LIB_CTX *libctx, const char *propq);
OSSL_CRMF_CERTTEMPLATE *OSSL_CRMF_MSG_get0_tmpl(const OSSL_CRMF_MSG *crm);
const ASN1_INTEGER
*OSSL_CRMF_CERTTEMPLATE_get0_serialNumber(const OSSL_CRMF_CERTTEMPLATE *tmpl);
const X509_NAME
*OSSL_CRMF_CERTTEMPLATE_get0_subject(const OSSL_CRMF_CERTTEMPLATE *tmpl);
const X509_NAME
*OSSL_CRMF_CERTTEMPLATE_get0_issuer(const OSSL_CRMF_CERTTEMPLATE *tmpl);
```

```
X509_EXTENSIONS
*OSSL_CRMF_CERTTEMPLATE_get0_extensions(const OSSL_CRMF_CERTTEMPLATE *tmpl);
const X509_NAME
*OSSL_CRMF_CERTID_get0_issuer(const OSSL_CRMF_CERTID *cid);
const ASN1_INTEGER
*OSSL_CRMF_CERTID_get0_serialNumber(const
 OSSL_CRMF_CERTID *cid);
int OSSL_CRMF_CERTTEMPLATE_fill(OSSL_CRMF_CERTTEMPLATE *tmpl,
                        EVP_PKEY *pubkey,
                        const X509_NAME *subject,
                        const X509_NAME *issuer,
                        const ASN1_INTEGER *serial);
X509
*OSSL_CRMF_ENCRYPTEDVALUE_get1_encCert(const OSSL_CRMF_ENCRYPTEDVALUE *ecert,
                            OSSL_LIB_CTX *libctx, const char *propq,
                            EVP_PKEY *pkey);

#  ifdef __cplusplus
}
#  endif
# endif /* !defined(OPENSSL_NO_CRMF) */
#endif /* !defined(OPENSSL_CRMF_H) */
```

Copyright Joyent, Inc. and other Node contributors. All rights reserved.
Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM,
 OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
IN THE SOFTWARE.
Copyright (c) 2015, Rebecca Turner

Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby
granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH
REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND

FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
The ISC License

Copyright (c) GitHub, Inc.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
// Copyright 2022 the V8 project authors. All rights reserved.
// Use of this source code is governed by a BSD-style license that can be
// found in the LICENSE file.

#ifndef V8_COMPILER_TURBOSHAFT_COPYING_PHASE_H_
#define V8_COMPILER_TURBOSHAFT_COPYING_PHASE_H_

#include <algorithm>
#include <cstddef>
#include <cstdint>
#include <utility>

#include "src/base/iterator.h"
#include "src/base/logging.h"
#include "src/base/small-vector.h"
#include "src/base/vector.h"
#include "src/codegen/optimized-compilation-info.h"
#include "src/compiler/node-origin-table.h"
#include "src/compiler/turboshaft/assembler.h"
#include "src/compiler/turboshaft/graph.h"
#include "src/compiler/turboshaft/index.h"
#include "src/compiler/turboshaft/operations.h"
#include "src/compiler/turboshaft/phase.h"
#include "src/compiler/turboshaft/reducer-traits.h"
#include "src/compiler/turboshaft/representations.h"
#include "src/compiler/turboshaft/snapshot-table.h"
#include "src/compiler/turboshaft/variable-reducer.h"
#include

```
 "src/zone/zone-containers.h"

namespace v8::internal::compiler::turboshaft {

using MaybeVariable = base::Optional<Variable>;

V8_EXPORT_PRIVATE int CountDecimalDigits(uint32_t value);
struct PaddingSpace {
 int spaces;
};
V8_EXPORT_PRIVATE std::ostream& operator<<(std::ostream& os,
                                PaddingSpace padding);

template <typename Next>
class ReducerBaseForwarder;

template <typename Derived, typename Base>
class OutputGraphAssembler : public Base {
#define FRIEND(op) friend struct op##Op;
 TURBOSHAFT_OPERATION_LIST(FRIEND)
#undef FRIEND
 template <size_t I, class D>
 friend struct FixedArityOperationT;

 OpIndex Map(OpIndex index) { return derived_this()->MapToNewGraph(index); }

 OptionalOpIndex Map(OptionalOpIndex index) {
   return derived_this()->MapToNewGraph(index);
 }

 template <size_t N>
 base::SmallVector<OpIndex, N> Map(base::Vector<const OpIndex> indices) {
   return derived_this()->template MapToNewGraph<N>(indices);
  }

public:
#define ASSEMBLE(operation)                                    \
 OpIndex AssembleOutputGraph##operation(const operation##Op& op) { \
   return op.Explode(                                    \
       [a = assembler()](auto... args) {                       \
         return a->Reduce##operation(args...);                 \
       },                                                \
       *this);                                             \
 }
 TURBOSHAFT_OPERATION_LIST(ASSEMBLE)
#undef ASSEMBLE

private:
```

```
 Derived* derived_this() { return static_cast<Derived*>(this); }
 Assembler<typename Base::ReducerList>* assembler() {
   return &derived_this()->Asm();
 }
};

template <class AfterNext>
class GraphVisitor : public OutputGraphAssembler<GraphVisitor<AfterNext>,
                                                 VariableReducer<AfterNext>> {
 template <typename N>
 friend class ReducerBaseForwarder;

public:
 using Next
 = VariableReducer<AfterNext>;
 TURBOSHAFT_REDUCER_BOILERPLATE(CopyingPhase)

 GraphVisitor()
     : input_graph_(Asm().modifiable_input_graph()),
       current_input_block_(nullptr),
       op_mapping_(Asm().input_graph().op_id_count(), OpIndex::Invalid(),
                   Asm().phase_zone(), &Asm().input_graph()),
       block_mapping_(Asm().input_graph().block_count(), nullptr,
                      Asm().phase_zone()),
       blocks_needing_variables_(Asm().input_graph().block_count(),
                                 Asm().phase_zone()),
       old_opindex_to_variables(Asm().input_graph().op_id_count(),
                                Asm().phase_zone(), &Asm().input_graph()),
       blocks_to_clone_(Asm().phase_zone()) {
   Asm().output_graph().Reset();
 }

 // `trace_reduction` is a template parameter to avoid paying for tracing at
 // runtime.
 template <bool trace_reduction>
 void VisitGraph() {
   Asm().Analyze();

   // Creating initial old-to-new Block
 mapping.
   for (Block& input_block : Asm().modifiable_input_graph().blocks()) {
     block_mapping_[input_block.index()] = Asm().output_graph().NewBlock(
         input_block.IsLoop() ? Block::Kind::kLoopHeader : Block::Kind::kMerge,
         &input_block);
   }

   // Visiting the graph.
   VisitAllBlocks<trace_reduction>();
```

```
  Finalize();
}

void Bind(Block* block) {
  Next::Bind(block);
  block->SetOrigin(current_input_block());
}

void Finalize() {
  // Updating the source_positions.
  if (!Asm().input_graph().source_positions().empty()) {
    for (OpIndex index : Asm().output_graph().AllOperationIndices()) {
      OpIndex origin = Asm().output_graph().operation_origins()[index];
      Asm().output_graph().source_positions()[index] =
          Asm().input_graph().source_positions()[origin];
    }
  }
  // Updating the operation origins.
  NodeOriginTable* origins = PipelineData::Get().node_origins();
  if (origins) {
    for (OpIndex
index : Asm().output_graph().AllOperationIndices()) {
      OpIndex origin = Asm().output_graph().operation_origins()[index];
      origins->SetNodeOrigin(index.id(), origin.id());
    }
  }

  input_graph_.SwapWithCompanion();
}

const Block* current_input_block() { return current_input_block_; }

bool* turn_loop_without_backedge_into_merge() {
  return &turn_loop_without_backedge_into_merge_;
}

// Emits a Goto to a cloned version of {input_block}, assuming that the only
// predecessor of this cloned copy will be the current block. {input_block} is
// not cloned right away (because this would recursively call VisitBlockBody,
// which could cause stack overflows), and is instead added to the
// {blocks_to_clone_} stack, whose blocks will be cloned once the current
// block has been fully visited.
void CloneBlockAndGoto(const Block* input_block) {
  Block* new_block =
      Asm().output_graph().NewBlock(input_block->kind(), input_block);

  //
```

```
 Computing which input of Phi operations to use when visiting
  // {input_block} (since {input_block} doesn't really have predecessors
  // anymore).
  int added_block_phi_input = input_block->GetPredecessorIndex(
      Asm().current_block()->OriginForBlockEnd());

  // There is no guarantees that {input_block} will be entirely removed just
  // because it's cloned/inlined, since it's possible that it has predecessors
  // for which this optimization didn't apply. As a result, we add it to
  // {blocks_needing_variables_}, so that if it's ever generated
  // normally, Variables are used when emitting its content, so that
  // they can later be merged when control flow merges with the current
  // version of {input_block} that we just cloned.
  blocks_needing_variables_.Add(input_block->index().id());

  Asm().Goto(new_block);

  blocks_to_clone_.push_back({input_block, added_block_phi_input, new_block});
 }

 // Visits and emits {input_block} right now (ie,
 in the current block). This
 // should not be called recursively in order to avoid stack overflow (ie,
 // processing {input_block} should never lead to calling CloneAndInlingBlock).
 void CloneAndInlineBlock(const Block* input_block) {
  if (Asm().generating_unreachable_operations()) return;

#ifdef DEBUG
  // Making sure that we didn't call CloneAndInlineBlock recursively.
  DCHECK(!is_in_recursive_inlining_);
  ScopedModification<bool> recursive_guard(&is_in_recursive_inlining_, true);
#endif

  // Computing which input of Phi operations to use when visiting
  // {input_block} (since {input_block} doesn't really have predecessors
  // anymore).
  int added_block_phi_input = input_block->GetPredecessorIndex(
      Asm().current_block()->OriginForBlockEnd());

  // There is no guarantees that {input_block} will be entirely removed just
  // because it's cloned/inlined, since it's possible that it has predecessors
  // for which this optimization didn't apply.
 As a result, we add it to
  // {blocks_needing_variables_}, so that if it's ever generated
  // normally, Variables are used when emitting its content, so that
  // they can later be merged when control flow merges with the current
  // version of {input_block} that we just cloned.
  blocks_needing_variables_.Add(input_block->index().id());
```

```
  ScopedModification<bool> set_true(&current_block_needs_variables_, true);
  VisitBlockBody<CanHavePhis::kYes, ForCloning::kYes, false>(
      input_block, added_block_phi_input);
}

// {InlineOp} introduces two limitations unlike {CloneAndInlineBlock}:
// 1. The input operation must not be emitted anymore as part of its
// regular input block;
// 2. {InlineOp} must not be used multiple times for the same input op.
bool InlineOp(OpIndex index, const Block* input_block) {
  return VisitOpAndUpdateMapping<false>(index, input_block);
}

template <bool can_be_invalid = false>
OpIndex MapToNewGraph(OpIndex old_index,
int predecessor_index = -1) {
  DCHECK(old_index.valid());
  OpIndex result = op_mapping_[old_index];

  if (!result.valid()) {
    // {op_mapping} doesn't have a mapping for {old_index}. The
    // VariableReducer should provide the mapping.
    MaybeVariable var = GetVariableFor(old_index);
    if constexpr (can_be_invalid) {
      if (!var.has_value()) {
        return OpIndex::Invalid();
      }
    }
    DCHECK(var.has_value());
    if (predecessor_index == -1) {
      result = Asm().GetVariable(var.value());
    } else {
      result = Asm().GetPredecessorValue(var.value(), predecessor_index);
    }
  }

  DCHECK_IMPLIES(!can_be_invalid, result.valid());
  return result;
}

Block* MapToNewGraph(const Block* block) const {
  Block* new_block = block_mapping_[block->index()];
  DCHECK_NOT_NULL(new_block);
  return new_block;
}

// The block from the input graph that corresponds to the current block as a
```

```
// branch destination.
Such a block might not exist, and this function uses a
// trick to compute such a block in almost all cases, but might rarely fail
// and return `nullptr` instead.
const Block* OriginForBlockStart(Block* block) const {
  // Check that `block->origin_` is still valid as a block start and was not
  // changed to a semantically different block when inlining blocks.
  const Block* origin = block->origin_;
  if (origin && MapToNewGraph(origin) == block) return origin;
  return nullptr;
}

// Clone all of the blocks in {sub_graph} (which should be Blocks of the input
// graph). If `keep_loop_kinds` is true, the loop headers are preserved, and
// otherwise they are marked as Merge. An initial GotoOp jumping to the 1st
// block of `sub_graph` is always emitted. The output Block corresponding to
// the 1st block of `sub_graph` is returned.
template <class Set>
Block* CloneSubGraph(Set sub_graph, bool keep_loop_kinds,
                     bool is_loop_after_peeling
= false) {
  // The BlockIndex of the blocks of `sub_graph` should be sorted so that
  // visiting them in order is correct (all of the predecessors of a block
  // should always be visited before the block itself).
  DCHECK(std::is_sorted(sub_graph.begin(), sub_graph.end(),
                        [](const Block* a, const Block* b) {
                          return a->index().id() <= b->index().id();
                        }));

  // 1. Create new blocks, and update old->new mapping. This is required to
  // emit multiple times the blocks of {sub_graph}: if a block `B1` in
  // {sub_graph} ends with a Branch/Goto to a block `B2` that is also in
  // {sub_graph}, then this Branch/Goto should go to the version of `B2` that
  // this CloneSubGraph will insert, rather than to a version inserted by a
  // previous call to CloneSubGraph or the version that the regular
  // VisitAllBlock function will emit.
  ZoneVector<Block*> old_mappings(sub_graph.size(),
Asm().phase_zone());
  for (auto&& [input_block, old_mapping] :
       base::zip(sub_graph, old_mappings)) {
    old_mapping = block_mapping_[input_block->index()];
    Block::Kind kind = keep_loop_kinds && input_block->IsLoop()
                           ? Block::Kind::kLoopHeader
                           : Block::Kind::kMerge;
    block_mapping_[input_block->index()] =
        Asm().output_graph().NewBlock(kind, input_block);
  }
```

```
  // 2. Visit block in correct order (begin to end)

  // Emit a goto to 1st block.
  Block* start = block_mapping_[(*sub_graph.begin())->index()];
#ifdef DEBUG
  if (is_loop_after_peeling) start->set_has_peeled_iteration();
#endif
  Asm().Goto(start);
  // Visiting `sub_graph`.
  for (const Block* block : sub_graph) {
    blocks_needing_variables_.Add(block->index().id());
    VisitBlock<false>(block);
    ProcessWaitingCloningAndInlining<false>();
  }

  // 3. Restore initial old->new mapping
  for (auto&&
 [input_block, old_mapping] :
       base::zip(sub_graph, old_mappings)) {
    block_mapping_[input_block->index()] = old_mapping;
  }

  return start;
 }

 template <bool can_be_invalid = false>
 OptionalOpIndex MapToNewGraph(OptionalOpIndex old_index,
                               int predecessor_index = -1) {
  if (!old_index.has_value()) return OptionalOpIndex::Invalid();
  return MapToNewGraph<can_be_invalid>(old_index.value(), predecessor_index);
 }

 template <size_t expected_size>
 base::SmallVector<OpIndex, expected_size> MapToNewGraph(
    base::Vector<const OpIndex> inputs) {
  base::SmallVector<OpIndex, expected_size> result;
  for (OpIndex input : inputs) {
    result.push_back(MapToNewGraph(input));
  }
  return result;
 }

private:
 template <bool trace_reduction>
 void VisitAllBlocks() {
  base::SmallVector<const Block*, 128> visit_stack;

  visit_stack.push_back(&Asm().input_graph().StartBlock());
```

```
  while (!visit_stack.empty())
{
    const Block* block = visit_stack.back();
    visit_stack.pop_back();
    VisitBlock<trace_reduction>(block);
    ProcessWaitingCloningAndInlining<trace_reduction>();

    for (Block* child = block->LastChild(); child != nullptr;
         child = child->NeighboringChild()) {
      visit_stack.push_back(child);
    }
  }
}

template <bool trace_reduction>
void VisitBlock(const Block* input_block) {
  current_block_needs_variables_ =
      blocks_needing_variables_.Contains(input_block->index().id());
  if constexpr (trace_reduction) {
    std::cout << "\nold " << PrintAsBlockHeader{*input_block} << "\n";
    std::cout << "new "
              << PrintAsBlockHeader{*MapToNewGraph(input_block),
                                    Asm().output_graph().next_block_index()}
              << "\n";
  }
  Block* new_block = MapToNewGraph(input_block);
  if (Asm().Bind(new_block)) {
    VisitBlockBody<CanHavePhis::kYes, ForCloning::kNo, trace_reduction>(
        input_block);
    if constexpr (trace_reduction) TraceBlockFinished();
  } else {
    if constexpr (trace_reduction) TraceBlockUnreachable();
  }

  // If we eliminate a loop backedge, we need to turn the loop into a
  // single-predecessor merge block.
  if (!turn_loop_without_backedge_into_merge_) return;
  const Operation& last_op = input_block->LastOperation(Asm().input_graph());
  if (auto* final_goto = last_op.TryCast<GotoOp>()) {
    if (final_goto->destination->IsLoop()) {
      if (input_block->index() >= final_goto->destination->index()) {
        Asm().FinalizeLoop(MapToNewGraph(final_goto->destination));
      } else {
        // We have a forward jump to a loop, rather than a backedge. We
        // don't need to do anything.
      }
    }
  }
```

```
}

enum class CanHavePhis { kNo, kYes };
enum class ForCloning { kNo, kYes };

template <CanHavePhis can_have_phis, ForCloning for_cloning,
          bool trace_reduction>
 void VisitBlockBody(const Block* input_block,
                     int added_block_phi_input = -1) {
  DCHECK_NOT_NULL(Asm().current_block());
  current_input_block_ = input_block;

  // Phis could be mutually recursive, for instance (in a loop header):
  //
  //     p1 = phi(a, p2)
  //     p2 = phi(b, p1)
  //
  // In this case, if we are currently unrolling the loop and visiting this
  // loop header that is now part of the loop body, then if we visit Phis
  // and emit new mapping (with CreateOldToNewMapping) as we go along, we
  // would visit p1 and emit a mapping saying "p1 = p2", and use this
  // mapping when visiting p2, then we'd map p2 to p2 instead of p1. To
  // overcome this issue, we first visit the Phis of the loop, emit the new
  // phis, and record the new mapping in a side-table ({new_phi_values}).
  // Then, we visit all of the operations of the loop and commit the new
  // mappings: phis were emitted before using the old
mapping, and all of
  // the other operations will use the new mapping (as they should).
  //
  // Note that Phis are not always at the begining of blocks, but when they
  // aren't, they can't have inputs from the current block (except on their
  // backedge for loop phis, but they start as PendingLoopPhis without
  // backedge input), so visiting all Phis first is safe.

  // Visiting Phis and collecting their new OpIndices.
  base::SmallVector<OpIndex, 64> new_phi_values;
  if constexpr (can_have_phis == CanHavePhis::kYes) {
    for (OpIndex index : Asm().input_graph().OperationIndices(*input_block)) {
      if (ShouldSkipOperation(Asm().input_graph().Get(index))) continue;
      DCHECK_NOT_NULL(Asm().current_block());
      if (Asm().input_graph().Get(index).template Is<PhiOp>()) {
        OpIndex new_index;
        if constexpr (for_cloning == ForCloning::kYes) {
          // When cloning a block, it only has a single predecessor, and Phis

    // should therefore be removed and be replaced by the input
          // corresponding to this predecessor.
          DCHECK_NE(added_block_phi_input, -1);
```

```
        // This Phi has been cloned/inlined, and has thus now a single
        // predecessor, and shouldn't be a Phi anymore.
        new_index = MapToNewGraph(
            Asm().input_graph().Get(index).input(added_block_phi_input));
      } else {
        new_index =
            VisitOpNoMappingUpdate<trace_reduction>(index, input_block);
      }
      new_phi_values.push_back(new_index);
      if (!Asm().current_block()) {
        // A reducer has detected, based on the Phis of the block that were
        // visited so far, that we are in unreachable code (or, less likely,
        // decided, based on some Phis only, to jump away from this block?).
        return;
      }
    }
  }
  DCHECK_NOT_NULL(Asm().current_block());

  // Visiting everything,
updating Phi mappings, and emitting non-phi
  // operations.
  int phi_num = 0;
  bool stopped_early = false;
  for (OpIndex index : base::IterateWithoutLast(
          Asm().input_graph().OperationIndices(*input_block))) {
    if (ShouldSkipOperation(Asm().input_graph().Get(index))) continue;
    const Operation& op = Asm().input_graph().Get(index);
    if constexpr (can_have_phis == CanHavePhis::kYes) {
      if (op.Is<PhiOp>()) {
        CreateOldToNewMapping(index, new_phi_values[phi_num++]);
        continue;
      }
    }
    // Blocks with a single predecessor (for which CanHavePhis might be kNo)
    // can still have phis if they used to be loop header that were turned
    // into regular blocks.
    DCHECK_IMPLIES(op.Is<PhiOp>(), op.input_count == 1);

    if (!VisitOpAndUpdateMapping<trace_reduction>(index, input_block)) {
      stopped_early = true;
      break;
    }
  }
  // If the last operation of the loop above (= the
one-before-last operation
  // of the block) was lowered to an unconditional deopt/trap/something like
```

```
  // that, then current_block will now be null, and there is no need visit the
  // last operation of the block.
  if (stopped_early || Asm().current_block() == nullptr) return;

  // The final operation (which should be a block terminator) of the block
  // is processed separately, because if it's a Goto to a block with a
  // single predecessor, we'll inline it. (we could have had a check `if (op
  // is a Goto)` in the loop above, but since this can only be true for the
  // last operation, we instead extracted it here to make things faster).
  const Operation& terminator =
      input_block->LastOperation(Asm().input_graph());
  DCHECK(terminator.IsBlockTerminator());
  VisitBlockTerminator<trace_reduction>(terminator, input_block);
}

template <bool trace_reduction>
bool VisitOpAndUpdateMapping(OpIndex index, const Block* input_block) {
  if (Asm().current_block()
== nullptr) return false;
  OpIndex new_index =
      VisitOpNoMappingUpdate<trace_reduction>(index, input_block);
  const Operation& op = Asm().input_graph().Get(index);
  if (CanBeUsedAsInput(op) && new_index.valid()) {
    CreateOldToNewMapping(index, new_index);
  }
  return true;
}

template <bool trace_reduction>
OpIndex VisitOpNoMappingUpdate(OpIndex index, const Block* input_block) {
  Block* current_block = Asm().current_block();
  DCHECK_NOT_NULL(current_block);
  Asm().SetCurrentOrigin(index);
  current_block->SetOrigin(input_block);
  OpIndex first_output_index = Asm().output_graph().next_operation_index();
  USE(first_output_index);
  const Operation& op = Asm().input_graph().Get(index);
  if constexpr (trace_reduction) TraceReductionStart(index);
  if (ShouldSkipOperation(op)) {
    if constexpr (trace_reduction) TraceOperationSkipped();
    return OpIndex::Invalid();
  }
  OpIndex new_index;
  switch (op.opcode)
 {
#define EMIT_INSTR_CASE(Name)                                    \
 case Opcode::k##Name:                                           \
  if (MayThrow(Opcode::k##Name)) return OpIndex::Invalid();      \
```

```
  new_index = Asm().ReduceInputGraph##Name(index, op.Cast<Name##Op>()); \
  break;
    TURBOSHAFT_OPERATION_LIST(EMIT_INSTR_CASE)
#undef EMIT_INSTR_CASE
  }
  if constexpr (trace_reduction) {
    if (CanBeUsedAsInput(op) && !new_index.valid()) {
      TraceOperationSkipped();
    } else {
      TraceReductionResult(current_block, first_output_index, new_index);
    }
  }
#ifdef DEBUG
  DCHECK_IMPLIES(new_index.valid(),
                 Asm().output_graph().BelongsToThisGraph(new_index));
  if (V8_UNLIKELY(v8_flags.turboshaft_verify_reductions)) {
    if (new_index.valid()) {
      const Operation& new_op = Asm().output_graph().Get(new_index);
      if (!new_op.Is<TupleOp>()) {
        // Checking that the outputs_rep
 of the new operation are the same as
        // the old operation. (except for tuples, since they don't have
        // outputs_rep)
        DCHECK_EQ(new_op.outputs_rep().size(), op.outputs_rep().size());
        for (size_t i = 0; i < new_op.outputs_rep().size(); ++i) {
          DCHECK(new_op.outputs_rep()[i].AllowImplicitRepresentationChangeTo(
              op.outputs_rep()[i]));
        }
      }
      Asm().Verify(index, new_index);
    }
  }
#endif  // DEBUG
  return new_index;
 }

 template <bool trace_reduction>
 void VisitBlockTerminator(const Operation& terminator,
                           const Block* input_block) {
  if (Asm().CanAutoInlineBlocksWithSinglePredecessor() &&
      terminator.Is<GotoOp>()) {
    Block* destination = terminator.Cast<GotoOp>().destination;
    if (destination->PredecessorCount() == 1) {
      block_to_inline_now_ = destination;
      return;
    }
  }
  // Just going through the regular VisitOp
```

```
function.
  OpIndex index = Asm().input_graph().Index(terminator);
  VisitOpAndUpdateMapping<trace_reduction>(index, input_block);
}

template <bool trace_reduction>
void ProcessWaitingCloningAndInlining() {
  InlineWaitingBlock<trace_reduction>();
  while (!blocks_to_clone_.empty()) {
    BlockToClone item = blocks_to_clone_.back();
    blocks_to_clone_.pop_back();
    DoCloneBlock<trace_reduction>(
        item.input_block, item.added_block_phi_input, item.new_output_block);
    InlineWaitingBlock<trace_reduction>();
  }
}

template <bool trace_reduction>
void InlineWaitingBlock() {
  while (block_to_inline_now_) {
    Block* input_block = block_to_inline_now_;
    block_to_inline_now_ = nullptr;
    ScopedModification<bool> set_true(&current_block_needs_variables_, true);
    if constexpr (trace_reduction) {
      std::cout << "Inlining " << PrintAsBlockHeader{*input_block} << "\n";
    }
    VisitBlockBody<CanHavePhis::kNo, ForCloning::kNo,
trace_reduction>(
        input_block);
  }
}

template <bool trace_reduction>
void DoCloneBlock(const Block* input_block, int added_block_phi_input,
                  Block* output_block) {
  DCHECK_EQ(output_block->PredecessorCount(), 1);
  if constexpr (trace_reduction) {
    std::cout << "\nCloning old " << PrintAsBlockHeader{*input_block} << "\n";
    std::cout << "As new "
              << PrintAsBlockHeader{*output_block,
                                    Asm().output_graph().next_block_index()}
              << "\n";
  }

  ScopedModification<bool> set_true(&current_block_needs_variables_, true);

  Asm().BindReachable(output_block);
  VisitBlockBody<CanHavePhis::kYes, ForCloning::kYes, trace_reduction>(
```

```
    input_block, added_block_phi_input);

  if constexpr (trace_reduction) TraceBlockFinished();
}

void TraceReductionStart(OpIndex index) {
  std::cout << " o" << index.id() << ": "
            << PaddingSpace{5 - CountDecimalDigits(index.id())}
             << OperationPrintStyle{Asm().input_graph().Get(index), "#o"}
            << "\n";
}
void TraceOperationSkipped() { std::cout << "> skipped\n\n"; }
void TraceBlockUnreachable() { std::cout << "> unreachable\n\n"; }
void TraceReductionResult(Block* current_block, OpIndex first_output_index,
                          OpIndex new_index) {
  if (new_index < first_output_index) {
    // The operation was replaced with an already existing one.
    std::cout << "> #n" << new_index.id() << "\n";
  }
  bool before_arrow = new_index >= first_output_index;
  for (const Operation& op : Asm().output_graph().operations(
           first_output_index, Asm().output_graph().next_operation_index())) {
    OpIndex index = Asm().output_graph().Index(op);
    const char* prefix;
    if (index == new_index) {
      prefix = ">";
      before_arrow = false;
    } else if (before_arrow) {
      prefix = "  ";
    } else {

  prefix = "    ";
    }
    std::cout << prefix << " n" << index.id() << ": "
              << PaddingSpace{5 - CountDecimalDigits(index.id())}
              << OperationPrintStyle{Asm().output_graph().Get(index), "#n"}
              << "\n";
    if (op.IsBlockTerminator() && Asm().current_block() &&
        Asm().current_block() != current_block) {
      current_block = &Asm().output_graph().Get(
          BlockIndex(current_block->index().id() + 1));
      std::cout << "new " << PrintAsBlockHeader{*current_block} << "\n";
    }
  }
  std::cout << "\n";
}
void TraceBlockFinished() { std::cout << "\n"; }
```

```
// These functions take an operation from the old graph and use the assembler
// to emit a corresponding operation in the new graph, translating inputs and
// blocks accordingly.
V8_INLINE OpIndex AssembleOutputGraphGoto(const GotoOp& op) {
  Block* destination = MapToNewGraph(op.destination);
  if (op.is_backedge) {
    DCHECK(destination->IsBound());
     DCHECK(destination->IsLoop());
    FixLoopPhis(op.destination);
  }
  // It is important that we first fix loop phis and then reduce the `Goto`,
  // because reducing the `Goto` can have side effects, in particular, it can
  // modify affect the SnapshotTable of `VariableReducer`, which is also used
  // by `FixLoopPhis()`.
  Asm().ReduceGoto(destination, op.is_backedge);
  return OpIndex::Invalid();
}
V8_INLINE OpIndex AssembleOutputGraphBranch(const BranchOp& op) {
  Block* if_true = MapToNewGraph(op.if_true);
  Block* if_false = MapToNewGraph(op.if_false);
  return Asm().ReduceBranch(MapToNewGraph(op.condition()), if_true, if_false,
                            op.hint);
}
OpIndex AssembleOutputGraphSwitch(const SwitchOp& op) {
  base::SmallVector<SwitchOp::Case, 16> cases;
  for (SwitchOp::Case c : op.cases) {
    cases.emplace_back(c.value, MapToNewGraph(c.destination), c.hint);
  }
  return Asm().ReduceSwitch(
      MapToNewGraph(op.input()),
       Asm().graph_zone()->CloneVector(base::VectorOf(cases)),
      MapToNewGraph(op.default_case), op.default_hint);
}
OpIndex AssembleOutputGraphPhi(const PhiOp& op) {
  if (op.input_count == 1) {
    // If, in the previous CopyingPhase, a loop header was turned into a
    // regular blocks, its PendingLoopPhis became Phis with a single input. We
    // can now just get rid of these Phis.
    return MapToNewGraph(op.input(0));
  }

  OpIndex ig_index = Asm().input_graph().Index(op);
  if (Asm().current_block()->IsLoop()) {
    DCHECK_EQ(op.input_count, 2);
    if (ig_index == op.input(PhiOp::kLoopPhiBackEdgeIndex)) {
      // Avoid emitting a Loop Phi which points to itself, instead
      // emit it's 0'th input.
      return MapToNewGraph(op.input(0));
```

```
    }
    return Asm().PendingLoopPhi(MapToNewGraph(op.input(0)), op.rep);
  }

  base::Vector<const OpIndex> old_inputs = op.inputs();
  base::SmallVector<OpIndex, 64>
new_inputs;
  int predecessor_count = Asm().current_block()->PredecessorCount();
  Block* old_pred = current_input_block_->LastPredecessor();
  Block* new_pred = Asm().current_block()->LastPredecessor();
  // Control predecessors might be missing after the optimization phase. So we
  // need to skip phi inputs that belong to control predecessors that have no
  // equivalent in the new graph.

  // We first assume that the order if the predecessors of the current block
  // did not change. If it did, {new_pred} won't be nullptr at the end of this
  // loop, and we'll instead fall back to the slower code below to compute the
  // inputs of the Phi.
  int predecessor_index = predecessor_count - 1;
  for (OpIndex input : base::Reversed(old_inputs)) {
    if (new_pred && new_pred->OriginForBlockEnd() == old_pred) {
      // Phis inputs have to come from predecessors. We thus have to
      // MapToNewGraph with {predecessor_index} so that we get an OpIndex that
       // is from a predecessor rather than one that comes from a Variable
      // merged in the current block.
      new_inputs.push_back(MapToNewGraph(input, predecessor_index));
      new_pred = new_pred->NeighboringPredecessor();
      predecessor_index--;
    }
    old_pred = old_pred->NeighboringPredecessor();
  }
  DCHECK_IMPLIES(new_pred == nullptr, old_pred == nullptr);

  if (new_pred != nullptr) {
    // If {new_pred} is not nullptr, then the order of the predecessors
    // changed. This should only happen with blocks that were introduced in
    // the previous graph. For instance, consider this (partial) dominator
    // tree:
    //
    //     7
    //      8
    //       10
    //     9
    //     11
    //
    // Where the predecessors of block 11 are blocks 9 and 10 (in that order).
    // In dominator visit order, block 10 will be visited before block 9.
    // Since blocks are added to predecessors when the predecessors
```

```
 are
    // visited, it means that in the new graph, the predecessors of block 11
    // are [10, 9] rather than [9, 10].
    // To account for this, we reorder the inputs of the Phi, and get rid of
    // inputs from blocks that vanished.

#ifdef DEBUG
    // To check that indices are set properly, we zap them in debug builds.
    for (auto& block : Asm().modifiable_input_graph().blocks()) {
      block.clear_custom_data();
    }
#endif
    uint32_t pos = current_input_block_->PredecessorCount() - 1;
    for (old_pred = current_input_block_->LastPredecessor();
         old_pred != nullptr; old_pred = old_pred->NeighboringPredecessor()) {
      // Store the current index of the {old_pred}.
      old_pred->set_custom_data(pos--, Block::CustomDataKind::kPhiInputIndex);
    }

    // Filling {new_inputs}: we iterate the new predecessors, and, for each
    // predecessor, we check the index of the input corresponding to the old
    // predecessor, and
 we put it next in {new_inputs}.
    new_inputs.clear();
    int predecessor_index = predecessor_count - 1;
    for (new_pred = Asm().current_block()->LastPredecessor();
         new_pred != nullptr; new_pred = new_pred->NeighboringPredecessor()) {
      const Block* origin = new_pred->OriginForBlockEnd();
      DCHECK_NOT_NULL(origin);
      OpIndex input = old_inputs[origin->get_custom_data(
          Block::CustomDataKind::kPhiInputIndex)];
      // Phis inputs have to come from predecessors. We thus have to
      // MapToNewGraph with {predecessor_index} so that we get an OpIndex that
      // is from a predecessor rather than one that comes from a Variable
      // merged in the current block.
      new_inputs.push_back(MapToNewGraph(input, predecessor_index));
      predecessor_index--;
    }
  }

  DCHECK_EQ(new_inputs.size(), Asm().current_block()->PredecessorCount());

  if (new_inputs.size() == 1) {
    // This Operation used to be a Phi
 in a Merge, but since one (or more) of
    // the inputs of the merge have been removed, there is no need for a Phi
    // anymore.
    return new_inputs[0];
```

```
  }

  std::reverse(new_inputs.begin(), new_inputs.end());
  return Asm().ReducePhi(base::VectorOf(new_inputs), op.rep);
 }
 OpIndex AssembleOutputGraphPendingLoopPhi(const PendingLoopPhiOp& op) {
  UNREACHABLE();
 }
 V8_INLINE OpIndex AssembleOutputGraphFrameState(const FrameStateOp& op) {
  auto inputs = MapToNewGraph<32>(op.inputs());
  return Asm().ReduceFrameState(base::VectorOf(inputs), op.inlined, op.data);
 }
 OpIndex AssembleOutputGraphCall(const CallOp& op) {
  OpIndex callee = MapToNewGraph(op.callee());
  OptionalOpIndex frame_state = MapToNewGraph(op.frame_state());
  auto arguments = MapToNewGraph<16>(op.arguments());
  return Asm().ReduceCall(callee, frame_state, base::VectorOf(arguments),
                          op.descriptor, op.Effects());
 }
 OpIndex AssembleOutputGraphDidntThrow(const
 DidntThrowOp& op) {
  const Operation& throwing_operation =
      Asm().input_graph().Get(op.throwing_operation());
  OpIndex result;
  switch (throwing_operation.opcode) {
#define CASE(Name)                                      \
 case Opcode::k##Name:                                  \
  result = Asm().ReduceInputGraph##Name(                \
      op.throwing_operation(), throwing_operation.Cast<Name##Op>()); \
  break;
    TURBOSHAFT_THROWING_OPERATIONS_LIST(CASE)
#undef CASE
    default:
      UNREACHABLE();
  }
  return result;
 }
 OpIndex AssembleOutputGraphCheckException(const CheckExceptionOp& op) {
  Graph::OpIndexIterator it(op.didnt_throw_block->begin(),
                            &Asm().input_graph());
  Graph::OpIndexIterator end(op.didnt_throw_block->end(),
                             &Asm().input_graph());
  // To translate `CheckException` to the new graph, we reduce the throwing
   // operation (actually it's `DidntThrow` operation, but that triggers the
  // actual reduction) with a catch scope. If the reduction replaces the
  // throwing operation with other throwing operations, all of them will be
  // connected to the provided catch block. The reduction should automatically
  // bind a block that represents non-throwing control flow of the original
```

```
  // operation, so we can inline the rest of the `didnt_throw` block.
  {
    CatchScope scope(Asm(), MapToNewGraph(op.catch_block));
    DCHECK(Asm().input_graph().Get(*it).template Is<DidntThrowOp>());
    if (!Asm().InlineOp(*it, op.didnt_throw_block)) {
      return OpIndex::Invalid();
    }
    ++it;
  }
  for (; it != end; ++it) {
    // Using `InlineOp` requires that the inlined operation is not emitted
    // multiple times. This is the case here because we just removed the
    // single predecessor of `didnt_throw_block`.
    if (!Asm().InlineOp(*it, op.didnt_throw_block))
{
      break;
    }
  }
  return OpIndex::Invalid();
}

void CreateOldToNewMapping(OpIndex old_index, OpIndex new_index) {
  DCHECK(old_index.valid());
  DCHECK(Asm().input_graph().BelongsToThisGraph(old_index));
  DCHECK_IMPLIES(new_index.valid(),
                 Asm().output_graph().BelongsToThisGraph(new_index));

  if (current_block_needs_variables_) {
    MaybeVariable var = GetVariableFor(old_index);
    if (!var.has_value()) {
      MaybeRegisterRepresentation rep =
          Asm().input_graph().Get(old_index).outputs_rep().size() == 1
              ? static_cast<const MaybeRegisterRepresentation&>(
                    Asm().input_graph().Get(old_index).outputs_rep()[0])
              : MaybeRegisterRepresentation::None();
      var = Asm().NewLoopInvariantVariable(rep);
      SetVariableFor(old_index, *var);
    }
    Asm().SetVariable(*var, new_index);
    return;
  }

  DCHECK(!op_mapping_[old_index].valid());

  op_mapping_[old_index] = new_index;
}

MaybeVariable GetVariableFor(OpIndex old_index) const {
```

```
  return old_opindex_to_variables[old_index];
}

void SetVariableFor(OpIndex old_index, MaybeVariable var) {
  DCHECK(!old_opindex_to_variables[old_index].has_value());
  old_opindex_to_variables[old_index] = var;
}

void FixLoopPhis(Block* input_graph_loop) {
  DCHECK(input_graph_loop->IsLoop());
  Block* output_graph_loop = MapToNewGraph(input_graph_loop);
  DCHECK(output_graph_loop->IsLoop());
  for (const Operation& op : Asm().input_graph().operations(
          input_graph_loop->begin(), input_graph_loop->end())) {
    if (auto* input_phi = op.TryCast<PhiOp>()) {
      OpIndex phi_index =
          MapToNewGraph<true>(Asm().input_graph().Index(*input_phi));
      if (!phi_index.valid() || !output_graph_loop->Contains(phi_index)) {
        // Unused phis are skipped, so they are not be mapped to anything in
        // the new graph. If the phi is
reduced to an operation from a
        // different block, then there is no loop phi in the current loop
        // header to take care of.
        continue;
      }
      Asm().FixLoopPhi(*input_phi, phi_index, output_graph_loop);
    }
  }
}

Graph& input_graph_;

const Block* current_input_block_;

// Mappings from old OpIndices to new OpIndices.
FixedOpIndexSidetable<OpIndex> op_mapping_;

// Mappings from old blocks to new blocks.
FixedBlockSidetable<Block*> block_mapping_;

// {current_block_needs_variables_} is set to true if the current block should
// use Variables to map old to new OpIndex rather than just {op_mapping}. This
// is typically the case when the block has been cloned.
bool current_block_needs_variables_ = false;

// When {turn_loop_without_backedge_into_merge_} is true (the default), when
// processing an input block that ended with a loop backedge but doesn't
// anymore, the loop header is turned into a regular merge. This
```

```
 can be turned
 // off when unrolling a loop for instance.
 bool turn_loop_without_backedge_into_merge_ = true;

 // Set of Blocks for which Variables should be used rather than
 // {op_mapping}.
 BitVector blocks_needing_variables_;

 // Mapping from old OpIndex to Variables.
 FixedOpIndexSidetable<MaybeVariable> old_opindex_to_variables;

 // When the last operation of a Block is a Goto to a Block with a single
 // predecessor, we always inline the destination into the current block. To
 // avoid making this process recursive (which could lead to stack overflows),
 // we set the variable {block_to_inline_now_} instead. Right after we're done
 // visiting a Block, the function ProcessWaitingCloningAndInlining will inline
 // {block_to_inline_now_} (if it's set) in a non-recursive way.
 Block* block_to_inline_now_ = nullptr;

 // When a Reducer wants to clone a block (for instance,
 // BranchEliminationReducer, in order to remove Phis or to replace a Branch by
 // a
 Goto), this block is not cloned right away, in order to avoid recursion
 // (which could lead to stack overflows). Instead, we add this block to
 // {blocks_to_clone_}. Right after we're done visiting a Block, the function
 // ProcessWaitingCloningAndInlining will actually clone the blocks in
 // {blocks_to_clone_} in a non-recursive way.
 struct BlockToClone {
   const Block* input_block;
   int added_block_phi_input;
   Block* new_output_block;
 };
 ZoneVector<BlockToClone> blocks_to_clone_;

#ifdef DEBUG
 // Recursively inlining blocks is still allowed (mainly for
 // LoopUnrollingReducer), but it shouldn't be actually recursive. This is
 // checked by the {is_in_recursive_inlining_}, which is set to true while
 // recursively inlining a block. Trying to inline a block while
 // {is_in_recursive_inlining_} is true will lead to a DCHECK failure.
 bool is_in_recursive_inlining_ = false;
#endif
 };

 template <template <class> class... Reducers>
 class TSAssembler;

 template
```

```
 <template <class> class... Reducers>
class CopyingPhaseImpl {
public:
 static void Run(Graph& input_graph, Zone* phase_zone,
                 bool trace_reductions = false) {
   TSAssembler<GraphVisitor, Reducers...> phase(
       input_graph, input_graph.GetOrCreateCompanion(), phase_zone);
#ifdef DEBUG
   if (trace_reductions) {
     phase.template VisitGraph<true>();
   } else {
     phase.template VisitGraph<false>();
   }
#else
   phase.template VisitGraph<false>();
#endif  // DEBUG
 }
};

template <template <typename> typename... Reducers>
class CopyingPhase {
public:
 static void Run(Zone* phase_zone) {
   PipelineData& data = PipelineData::Get();
   Graph& input_graph = data.graph();
   CopyingPhaseImpl<Reducers...>::Run(
       input_graph, phase_zone, data.info()->turboshaft_trace_reduction());
 }
};

}  // namespace v8::internal::compiler::turboshaft

#endif  // V8_COMPILER_TURBOSHAFT_COPYING_PHASE_H_
<!-- DO NOT EDIT! Generated by `%(generating_script_filename)s --spec %(spec_directory)s/` -->
{
 'variables': {
   'openssl_sources': [
     'openssl/crypto/aes/aes_cbc.c',
     'openssl/crypto/aes/aes_core.c',
     'openssl/crypto/aes/aes_ecb.c',
     'openssl/crypto/aes/aes_misc.c',
     'openssl/crypto/bn/bn_add.c',
     'openssl/crypto/bn/bn_asm.c',
     'openssl/crypto/bn/bn_blind.c',
     'openssl/crypto/bn/bn_const.c',
     'openssl/crypto/bn/bn_conv.c',
     'openssl/crypto/bn/bn_ctx.c',
     'openssl/crypto/bn/bn_dh.c',
```

'openssl/crypto/bn/bn_div.c',
'openssl/crypto/bn/bn_exp.c',
'openssl/crypto/bn/bn_exp2.c',
'openssl/crypto/bn/bn_gcd.c',
'openssl/crypto/bn/bn_gf2m.c',
'openssl/crypto/bn/bn_intern.c',
'openssl/crypto/bn/bn_kron.c',
'openssl/crypto/bn/bn_lib.c',
'openssl/crypto/bn/bn_mod.c',
'openssl/crypto/bn/bn_mont.c',
'openssl/crypto/bn/bn_mpi.c',
'openssl/crypto/bn/bn_mul.c',
'openssl/crypto/bn/bn_nist.c',
'openssl/crypto/bn/bn_prime.c',
'openssl/crypto/bn/bn_rand.c',
'openssl/crypto/bn/bn_recp.c',
'openssl/crypto/bn/bn_rsa_fips186_4.c',
'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_word.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/cmac/cmac.c',
'openssl/crypto/des/des_enc.c',
'openssl/crypto/des/ecb3_enc.c',
'openssl/crypto/des/fcrypt_b.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',

```
  'openssl/crypto/ec/curve448/scalar.c',
  'openssl/crypto/ec/curve25519.c',
  'openssl/crypto/ec/ec2_oct.c',
  'openssl/crypto/ec/ec2_smpl.c',
  'openssl/crypto/ec/ec_asn1.c',
  'openssl/crypto/ec/ec_backend.c',
  'openssl/crypto/ec/ec_check.c',
  'openssl/crypto/ec/ec_curve.c',
  'openssl/crypto/ec/ec_cvt.c',
  'openssl/crypto/ec/ec_key.c',
  'openssl/crypto/ec/ec_kmeth.c',
  'openssl/crypto/ec/ec_lib.c',
  'openssl/crypto/ec/ec_mult.c',
  'openssl/crypto/ec/ec_oct.c',
  'openssl/crypto/ec/ecdh_kdf.c',
  'openssl/crypto/ec/ecdh_ossl.c',
  'openssl/crypto/ec/ecdsa_ossl.c',

 'openssl/crypto/ec/ecdsa_sign.c',
  'openssl/crypto/ec/ecdsa_vrf.c',
  'openssl/crypto/ec/ecp_mont.c',
  'openssl/crypto/ec/ecp_nist.c',
  'openssl/crypto/ec/ecp_oct.c',
  'openssl/crypto/ec/ecp_smpl.c',
  'openssl/crypto/ec/ecx_backend.c',
  'openssl/crypto/ec/ecx_key.c',
  'openssl/crypto/evp/asymcipher.c',
  'openssl/crypto/evp/dh_support.c',
  'openssl/crypto/evp/digest.c',
  'openssl/crypto/evp/ec_support.c',
  'openssl/crypto/evp/evp_enc.c',
  'openssl/crypto/evp/evp_fetch.c',
  'openssl/crypto/evp/evp_lib.c',
  'openssl/crypto/evp/evp_rand.c',
  'openssl/crypto/evp/evp_utils.c',
  'openssl/crypto/evp/exchange.c',
  'openssl/crypto/evp/kdf_lib.c',
  'openssl/crypto/evp/kdf_meth.c',
  'openssl/crypto/evp/kem.c',
  'openssl/crypto/evp/keymgmt_lib.c',
  'openssl/crypto/evp/keymgmt_meth.c',
  'openssl/crypto/evp/m_sigver.c',
  'openssl/crypto/evp/mac_lib.c',
  'openssl/crypto/evp/mac_meth.c',
   'openssl/crypto/evp/p_lib.c',
  'openssl/crypto/evp/pmeth_check.c',
  'openssl/crypto/evp/pmeth_gn.c',
  'openssl/crypto/evp/pmeth_lib.c',
```

'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/initthread.c',
'openssl/crypto/mem_clr.c',
'openssl/crypto/o_str.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/property/defn_cache.c',

'openssl/crypto/property/property.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rsa/rsa_acvp_test_params.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/sha/keccak1600.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/stack/stack.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_fips.c',
'openssl/providers/fips/fipsprov.c',
'openssl/providers/fips/self_test.c',
'openssl/providers/fips/self_test_kats.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',

'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',

'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',

```
  'openssl/providers/implementations/signature/rsa_sig.c',
  'openssl/ssl/s3_cbc.c',
  'openssl/providers/common/der/der_dsa_key.c',
  'openssl/providers/common/der/der_dsa_sig.c',
  'openssl/providers/common/der/der_ec_key.c',
  'openssl/providers/common/der/der_ec_sig.c',
  'openssl/providers/common/der/der_ecx_key.c',
  'openssl/providers/common/der/der_rsa_key.c',
  'openssl/providers/common/provider_ctx.c',
  'openssl/providers/common/provider_err.c',
  'openssl/providers/implementations/ciphers/ciphercommon.c',
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
   'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/fips/fips_entry.c',

 ],
 'openssl_sources_BSD-x86': [
  './config/archs/BSD-x86/no-asm/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86/no-asm/providers/common/der/der_wrap_gen.c',
   './config/archs/BSD-x86/no-asm/providers/legacy.ld',
  './config/archs/BSD-x86/no-asm/providers/fips.ld',

 ],
 'openssl_defines_BSD-x86': [
  'NDEBUG',
  'L_ENDIAN',
  'OPENSSL_BUILDING_OPENSSL',
  'FIPS_MODULE',
  'FIPS_MODULE',
 ],
 'openssl_cflags_BSD-x86': [
  '-Wall -O3 -fomit-frame-pointer',
  '-pthread',
  '-Wall -O3 -fomit-frame-pointer',
 ],
 'openssl_ex_libs_BSD-x86': [
  '-pthread',
```

```
  ],
  'linker_script': ''
 },
 'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86)'],
 'cflags': ['<@(openssl_cflags_BSD-x86)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86)'],

 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86)'],
 },
}
```

This license applies to parts of libuv originating from the
https://github.com/joyent/libuv repository:

====

Copyright Joyent, Inc. and other Node contributors. All rights reserved.
Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE
 LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
IN THE SOFTWARE.

====

This license applies to all parts of libuv that are not externally

maintained libraries.

The externally maintained libraries used by libuv are:

 - tree.h (from FreeBSD), copyright Niels Provos. Two clause BSD license.

 - inet_pton and inet_ntop implementations, contained in src/inet.c, are
   copyright the Internet Systems Consortium, Inc., and licensed under the ISC
   license.
{
 'variables': {
   'openssl_defines_BSD-x86_64': [
     'NDEBUG',
     'L_ENDIAN',
     'OPENSSL_BUILDING_OPENSSL',
     'AES_ASM',
     'BSAES_ASM',
     'CMLL_ASM',
     'ECP_NISTZ256_ASM',
     'GHASH_ASM',
     'KECCAK1600_ASM',
     'MD5_ASM',
     'OPENSSL_BN_ASM_GF2m',
     'OPENSSL_BN_ASM_MONT',
     'OPENSSL_BN_ASM_MONT5',
     'OPENSSL_CPUID_OBJ',
     'OPENSSL_IA32_SSE2',
     'PADLOCK_ASM',
     'POLY1305_ASM',
     'RC4_ASM',
     'SHA1_ASM',
     'SHA256_ASM',
     'SHA512_ASM',
     'VPAES_ASM',
     'WHIRLPOOL_ASM',
     'X25519_ASM',
     'OPENSSL_PIC',
   ],
   'openssl_cflags_BSD-x86_64': [
     '-Wa,--noexecstack',
     '-Wall -O3',
     '-pthread',
     '-Wall -O3',
   ],
   'openssl_ex_libs_BSD-x86_64': [
     '-pthread',
   ],
   'openssl_cli_srcs_BSD-x86_64': [

```
 'openssl/apps/lib/cmp_mock_srv.c',
 'openssl/apps/asn1parse.c',
 'openssl/apps/ca.c',
 'openssl/apps/ciphers.c',
 'openssl/apps/cmp.c',

'openssl/apps/cms.c',
 'openssl/apps/crl.c',
 'openssl/apps/crl2pkcs7.c',
 'openssl/apps/dgst.c',
 'openssl/apps/dhparam.c',
 'openssl/apps/dsa.c',
 'openssl/apps/dsaparam.c',
 'openssl/apps/ec.c',
 'openssl/apps/ecparam.c',
 'openssl/apps/enc.c',
 'openssl/apps/engine.c',
 'openssl/apps/errstr.c',
 'openssl/apps/fipsinstall.c',
 'openssl/apps/gendsa.c',
 'openssl/apps/genpkey.c',
 'openssl/apps/genrsa.c',
 'openssl/apps/info.c',
 'openssl/apps/kdf.c',
 'openssl/apps/list.c',
 'openssl/apps/mac.c',
 'openssl/apps/nseq.c',
 'openssl/apps/ocsp.c',
 'openssl/apps/openssl.c',
 'openssl/apps/passwd.c',
 'openssl/apps/pkcs12.c',
 'openssl/apps/pkcs7.c',
 'openssl/apps/pkcs8.c',
 'openssl/apps/pkey.c',
 'openssl/apps/pkeyparam.c',
 'openssl/apps/pkeyutl.c',
 'openssl/apps/prime.c',
 './config/archs/BSD-x86_64/asm_avx2/apps/progs.c',

'openssl/apps/rand.c',
 'openssl/apps/rehash.c',
 'openssl/apps/req.c',
 'openssl/apps/rsa.c',
 'openssl/apps/rsautl.c',
 'openssl/apps/s_client.c',
 'openssl/apps/s_server.c',
 'openssl/apps/s_time.c',
 'openssl/apps/sess_id.c',
```

```
    'openssl/apps/smime.c',
    'openssl/apps/speed.c',
    'openssl/apps/spkac.c',
    'openssl/apps/srp.c',
    'openssl/apps/storeutl.c',
    'openssl/apps/ts.c',
    'openssl/apps/verify.c',
    'openssl/apps/version.c',
    'openssl/apps/x509.c',
    'openssl/apps/lib/app_libctx.c',
    'openssl/apps/lib/app_params.c',
    'openssl/apps/lib/app_provider.c',
    'openssl/apps/lib/app_rand.c',
    'openssl/apps/lib/app_x509.c',
    'openssl/apps/lib/apps.c',
    'openssl/apps/lib/apps_ui.c',
    'openssl/apps/lib/columns.c',
    'openssl/apps/lib/engine.c',
    'openssl/apps/lib/engine_loader.c',
    'openssl/apps/lib/fmt.c',
    'openssl/apps/lib/http_server.c',
    'openssl/apps/lib/names.c',
     'openssl/apps/lib/opt.c',
    'openssl/apps/lib/s_cb.c',
    'openssl/apps/lib/s_socket.c',
    'openssl/apps/lib/tlssrp_depr.c',
  ],
 },
 'defines': ['<@(openssl_defines_BSD-x86_64)'],
 'include_dirs': [
   './include',
 ],
 'cflags' : ['<@(openssl_cflags_BSD-x86_64)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],
 'sources': ['<@(openssl_cli_srcs_BSD-x86_64)'],
}
```

The ISC License

Copyright (c) 2011-2023 Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES

WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

```
/*
* WARNING: do not edit!
* Generated by util/mkbuildinf.pl
*
* Copyright 2014-2025 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#define PLATFORM "platform: BSD-x86"
#define DATE "built on: Wed Mar  5 20:59:02 2025 UTC"

/*
* Generate compiler_flags as an array of individual characters. This is a
* workaround for the situation where CFLAGS gets too long for a C90 string
* literal
*/
static const char compiler_flags[] = {
  'c','o','m','p','i','l','e','r',':',' ','g','c','c',' ','-','f',
  'P','I','C',' ','-','p','t','h','r','e','a','d',' ','-','W','a',
  ',','-','-','n','o','e','x','e','c','s','t','a','c','k',' ','-',
  'W','a','l','l',' ','-','O','3',' ','-','f','o','m','i','t','-',
  'f','r','a','m','e','-','p','o','i','n','t','e','r',' '
 ','-','D',
  'L','_','E','N','D','I','A','N',' ','-','D','O','P','E','N','S',
  'S','L','_','P','I','C',' ','-','D','_','T','H','R','E','A','D',
  '_','S','A','F','E',' ','-','D','_','R','E','E','N','T','R','A',
  'N','T',' ','-','D','O','P','E','N','S','S','L','_','B','U','I',
  'L','D','I','N','G','_','O','P','E','N','S','S','L',' ','-','D',
  'N','D','E','B','U','G','\0'
};
```

UNRECOGNIZED LICENSE; MD5 sum: 4677085322ac45a69a45a4c654b8c13b

MIT License

Copyright (c) 2019 Colin Ihrig and Contributors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom
to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each

author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the
terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".
Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously
and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.
You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all
third parties under the terms of this License.
c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)
These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from

the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)
The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives

a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any
further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.
If any portion of this section is
held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries
either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.
Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this
License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.
NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM

"AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this
is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and an idea of what it does.>
Copyright (C) < yyyy> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General
Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program,
if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.
Copyright (c) 2012-2014 Andris Reinman

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
MIT License

Copyright (c) Sindre Sorhus <sindresorhus@gmail.com> (sindresorhus.com)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR

COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Blue Oak Model License

Version 1.0.0

Purpose

This license gives everyone as much permission to work with
this software as possible, while protecting contributors
from liability.

Acceptance

In order to receive this license, you must agree to its
rules. The rules of this license are both obligations
under that agreement and conditions to your license.
You must not do anything with this software that triggers
a rule that you cannot or will not follow.

Copyright

Each contributor licenses you to do everything with this
software that would otherwise infringe that contributor's
copyright in it.

Notices

You must ensure that everyone who gets a copy of
any part of this software from you, with or without
changes, also gets the text of this license or a link to
<https://blueoakcouncil.org/license/1.0.0>.

Excuse

If anyone notifies you in writing that you have not
complied with [Notices](#notices), you can keep your
license by taking all practical steps to comply within
30
days after the notice. If you do not do so, your license
ends immediately.

Patent

Each contributor licenses you to do everything with this
software that would otherwise infringe any patent claims

they can license or become able to license.

Reliability

No contributor can revoke this license.

No Liability

***As far as the law allows, this software comes as is,
without any warranty or condition, and no contributor
will be liable to anyone for any damages related to this
software or this license, under any kind of legal claim.***
/*
* WARNING: do not edit!
* Generated by util/mkbuildinf.pl
*
* Copyright 2014-2025 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#define PLATFORM "platform: BSD-x86"
#define DATE "built on: Wed Mar 5 20:59:28 2025 UTC"

/*
* Generate compiler_flags as an array of individual characters. This is a
* workaround for the situation where CFLAGS gets too long for a C90 string
* literal
*/
static const char compiler_flags[] = {
  'c','o','m','p','i','l','e','r',':',' ','c','c',' ','-','f','P',
  'I','C',' ','-','p','t','h','r','e','a','d',' ','-','W','a','l',
  'l',' ','-','O','3',' ','-','f','o','m','i','t','-','f','r','a',
  'm','e','-','p','o','i','n','t','e','r',' ','-','D','L','_','E',
  'N','D','I','A','N','_'
 ','-','D','O','P','E','N','S','S','L','_',
  'P','I','C',' ','-','D','_','T','H','R','E','A','D','_','S','A',
  'F','E',' ','-','D','_','R','E','E','N','T','R','A','N','T',' ',
  '-','D','O','P','E','N','S','S','L','_','B','U','I','L','D','I',
  'N','G','_','O','P','E','N','S','S','L',' ','-','D','N','D','E',
  'B','U','G','\0'
};
The ISC License

Copyright (c) Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
The ISC License

Copyright (c) 2015-2023 Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
```
/*
* WARNING: do not edit!
* Generated by configdata.pm from Configurations/common0.tmpl, Configurations/unix-Makefile.tmpl
* via Makefile.in
*
* Copyright 2016-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#ifndef OPENSSL_CONFIGURATION_H
# define OPENSSL_CONFIGURATION_H
# pragma once

# ifdef  __cplusplus
extern "C" {
# endif
```

```
# ifdef OPENSSL_ALGORITHM_DEFINES
#  error OPENSSL_ALGORITHM_DEFINES no longer supported
# endif

/*
* OpenSSL was configured with the following options:
*/

# define OPENSSL_CONFIGURED_API 30000
# ifndef OPENSSL_RAND_SEED_OS
#  define OPENSSL_RAND_SEED_OS
# endif
# ifndef OPENSSL_THREADS
#  define OPENSSL_THREADS
# endif
# ifndef OPENSSL_NO_AFALGENG
#  define OPENSSL_NO_AFALGENG
# endif
# ifndef
 OPENSSL_NO_ASAN
#  define OPENSSL_NO_ASAN
# endif
# ifndef OPENSSL_NO_COMP
#  define OPENSSL_NO_COMP
# endif
# ifndef OPENSSL_NO_CRYPTO_MDEBUG
#  define OPENSSL_NO_CRYPTO_MDEBUG
# endif
# ifndef OPENSSL_NO_CRYPTO_MDEBUG_BACKTRACE
#  define OPENSSL_NO_CRYPTO_MDEBUG_BACKTRACE
# endif
# ifndef OPENSSL_NO_EC_NISTP_64_GCC_128
#  define OPENSSL_NO_EC_NISTP_64_GCC_128
# endif
# ifndef OPENSSL_NO_EGD
#  define OPENSSL_NO_EGD
# endif
# ifndef OPENSSL_NO_EXTERNAL_TESTS
#  define OPENSSL_NO_EXTERNAL_TESTS
# endif
# ifndef OPENSSL_NO_FUZZ_AFL
#  define OPENSSL_NO_FUZZ_AFL
# endif
# ifndef OPENSSL_NO_FUZZ_LIBFUZZER
#  define OPENSSL_NO_FUZZ_LIBFUZZER
# endif
# ifndef OPENSSL_NO_KTLS
#  define OPENSSL_NO_KTLS
```

```
# endif
# ifndef OPENSSL_NO_LOADERENG
#  define OPENSSL_NO_LOADERENG
# endif
# ifndef OPENSSL_NO_MD2
#  define OPENSSL_NO_MD2
# endif
# ifndef OPENSSL_NO_MSAN
#  define OPENSSL_NO_MSAN
# endif
# ifndef OPENSSL_NO_RC5
#  define OPENSSL_NO_RC5
# endif
# ifndef OPENSSL_NO_SCTP
#  define OPENSSL_NO_SCTP
#
 endif
# ifndef OPENSSL_NO_SSL3
#  define OPENSSL_NO_SSL3
# endif
# ifndef OPENSSL_NO_SSL3_METHOD
#  define OPENSSL_NO_SSL3_METHOD
# endif
# ifndef OPENSSL_NO_TRACE
#  define OPENSSL_NO_TRACE
# endif
# ifndef OPENSSL_NO_UBSAN
#  define OPENSSL_NO_UBSAN
# endif
# ifndef OPENSSL_NO_UNIT_TEST
#  define OPENSSL_NO_UNIT_TEST
# endif
# ifndef OPENSSL_NO_UPLINK
#  define OPENSSL_NO_UPLINK
# endif
# ifndef OPENSSL_NO_WEAK_SSL_CIPHERS
#  define OPENSSL_NO_WEAK_SSL_CIPHERS
# endif
# ifndef OPENSSL_NO_DYNAMIC_ENGINE
#  define OPENSSL_NO_DYNAMIC_ENGINE
# endif


/* Generate 80386 code? */
# undef I386_ONLY

/*
* The following are cipher-specific, but are part of the public API.
```

```
*/
# if !defined(OPENSSL_SYS_UEFI)
#  undef BN_LLONG
/* Only one for the following should be defined */
#  define SIXTY_FOUR_BIT_LONG
#  undef SIXTY_FOUR_BIT
#  undef THIRTY_TWO_BIT
# endif

# define RC4_INT unsigned int

# ifdef  __cplusplus
}
# endif

#endif                          /* OPENSSL_CONFIGURATION_H
 */
```

ISC License

Copyright GitHub Inc.

Permission to use, copy, modify, and/or distribute this
software for any purpose with or without fee is hereby
granted, provided that the above copyright notice and this
permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND NPM DISCLAIMS ALL
WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO
EVENT SHALL NPM BE LIABLE FOR ANY SPECIAL, DIRECT,
INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS,
WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE
USE OR PERFORMANCE OF THIS SOFTWARE.

```
{
 'variables': {
   'openssl_sources': [
     'openssl/crypto/aes/aes_ecb.c',
     'openssl/crypto/aes/aes_misc.c',
     'openssl/crypto/bn/bn_add.c',
     'openssl/crypto/bn/bn_blind.c',
     'openssl/crypto/bn/bn_const.c',
     'openssl/crypto/bn/bn_conv.c',
     'openssl/crypto/bn/bn_ctx.c',
     'openssl/crypto/bn/bn_dh.c',
     'openssl/crypto/bn/bn_div.c',
     'openssl/crypto/bn/bn_exp.c',
```

'openssl/crypto/bn/bn_exp2.c',
'openssl/crypto/bn/bn_gcd.c',
'openssl/crypto/bn/bn_gf2m.c',
'openssl/crypto/bn/bn_intern.c',
'openssl/crypto/bn/bn_kron.c',
'openssl/crypto/bn/bn_lib.c',
'openssl/crypto/bn/bn_mod.c',
'openssl/crypto/bn/bn_mont.c',
'openssl/crypto/bn/bn_mpi.c',
'openssl/crypto/bn/bn_mul.c',
'openssl/crypto/bn/bn_nist.c',
'openssl/crypto/bn/bn_prime.c',
'openssl/crypto/bn/bn_rand.c',
'openssl/crypto/bn/bn_recp.c',
'openssl/crypto/bn/bn_rsa_fips186_4.c',
'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_word.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/cmac/cmac.c',
'openssl/crypto/des/ecb3_enc.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',

'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_nistz256.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',

'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/initthread.c',
'openssl/crypto/o_str.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rsa/rsa_acvp_test_params.c',

'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/sha/keccak1600.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/stack/stack.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_fips.c',
'openssl/providers/fips/fipsprov.c',
'openssl/providers/fips/self_test.c',
'openssl/providers/fips/self_test_kats.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',

'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',
'openssl/ssl/s3_cbc.c',
'openssl/providers/common/der/der_dsa_key.c',
'openssl/providers/common/der/der_dsa_sig.c',
'openssl/providers/common/der/der_ec_key.c',
'openssl/providers/common/der/der_ec_sig.c',
'openssl/providers/common/der/der_ecx_key.c',

```
  'openssl/providers/common/der/der_rsa_key.c',
  'openssl/providers/common/provider_ctx.c',
  'openssl/providers/common/provider_err.c',
  'openssl/providers/implementations/ciphers/ciphercommon.c',
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
   'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/fips/fips_entry.c',

 ],
 'openssl_sources_BSD-x86': [
  './config/archs/BSD-x86/asm_avx2/crypto/aes/aes-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/aes/aesni-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/aes/vpaes-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bf/bf-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bn/bn-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bn/co-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bn/x86-gf2m.S',
  './config/archs/BSD-x86/asm_avx2/crypto/bn/x86-mont.S',
  './config/archs/BSD-x86/asm_avx2/crypto/camellia/cmll-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/chacha/chacha-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/des/crypt586.S',
   './config/archs/BSD-x86/asm_avx2/crypto/des/des-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/ec/ecp_nistz256-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/x86cpuid.S',
  './config/archs/BSD-x86/asm_avx2/crypto/md5/md5-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/modes/ghash-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/poly1305/poly1305-x86.S',
  './config/archs/BSD-x86/asm_avx2/crypto/rc4/rc4-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/ripemd/rmd-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/sha/sha1-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/sha/sha256-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/sha/sha512-586.S',
  './config/archs/BSD-x86/asm_avx2/crypto/whrlpool/wp-mmx.S',
  './config/archs/BSD-x86/asm_avx2/engines/e_padlock-x86.S',
  './config/archs/BSD-x86/asm_avx2/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86/asm_avx2/providers/common/der/der_digests_gen.c',
   './config/archs/BSD-x86/asm_avx2/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86/asm_avx2/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86/asm_avx2/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86/asm_avx2/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86/asm_avx2/providers/common/der/der_wrap_gen.c',
  './config/archs/BSD-x86/asm_avx2/providers/legacy.ld',
```

```
    './config/archs/BSD-x86/asm_avx2/providers/fips.ld',

  ],
  'openssl_defines_BSD-x86': [
    'NDEBUG',
    'L_ENDIAN',
    'OPENSSL_BUILDING_OPENSSL',
    'AES_ASM',
    'DES_ASM',
    'ECP_NISTZ256_ASM',
    'FIPS_MODULE',
    'GHASH_ASM',
    'OPENSSL_BN_ASM_GF2m',
    'OPENSSL_BN_ASM_MONT',
    'OPENSSL_BN_ASM_PART_WORDS',
    'OPENSSL_CPUID_OBJ',
    'OPENSSL_IA32_SSE2',
    'SHA1_ASM',
    'SHA256_ASM',
    'SHA512_ASM',
    'VPAES_ASM',
    'FIPS_MODULE',
  ],
  'openssl_cflags_BSD-x86': [
    '-Wa,--noexecstack',
     '-Wall -O3 -fomit-frame-pointer',
    '-pthread',
    '-Wall -O3 -fomit-frame-pointer',
  ],
  'openssl_ex_libs_BSD-x86': [
    '-pthread',
  ],
  'linker_script': ''
},
'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
],
'defines': ['<@(openssl_defines_BSD-x86)'],
'cflags': ['<@(openssl_cflags_BSD-x86)'],
'libraries': ['<@(openssl_ex_libs_BSD-x86)'],

'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86)'],
'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
```

'defines': ['<@(openssl_defines_BSD-x86)'],
},
}
(MIT)

Copyright (c) 2013 Julian Gruber <julian@juliangruber.com>

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
/* Copyright Joyent, Inc. and other Node contributors. All rights reserved.
*
* Permission is hereby granted, free of charge, to any person obtaining a copy
* of this software and associated documentation files (the "Software"), to
* deal in the Software without restriction, including without limitation the
* rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
* sell copies of the Software, and to permit persons to whom the Software is
* furnished to do so, subject to the following conditions:
*
* The above copyright notice and this permission notice shall be included in
* all copies or substantial portions of the Software.
*
* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
* IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
* FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
* AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
* LIABILITY, WHETHER IN
AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
* FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
* IN THE SOFTWARE.
*/

#ifndef UV_BSD_H

```
#define UV_BSD_H

#define UV_PLATFORM_FS_EVENT_FIELDS                                   \
 uv__io_t event_watcher;                                              \

#define UV_IO_PRIVATE_PLATFORM_FIELDS                                 \
 int rcount;                                                          \
 int wcount;                                                          \

#define UV_HAVE_KQUEUE 1

#endif /* UV_BSD_H */
```

This license applies to all parts of V8 that are not externally
maintained libraries. The externally maintained libraries used by V8
are:

 - PCRE test suite, located in
   test/mjsunit/third_party/regexp-pcre/regexp-pcre.js. This is based on the
   test suite from PCRE-7.3, which is copyrighted by the University
   of Cambridge and Google, Inc. The copyright notice and license
   are embedded in regexp-pcre.js.

 - Layout tests, located in test/mjsunit/third_party/object-keys. These are
   based on layout tests from webkit.org which are copyrighted by
   Apple Computer, Inc. and released under a 3-clause BSD license.

 - Strongtalk assembler, the basis of the files assembler-arm-inl.h,
   assembler-arm.cc, assembler-arm.h, assembler-ia32-inl.h,
   assembler-ia32.cc, assembler-ia32.h, assembler-x64-inl.h,
   assembler-x64.cc, assembler-x64.h, assembler.cc and assembler.h.
   This code is copyrighted by Sun Microsystems Inc. and released
   under a 3-clause BSD license.

 - Valgrind client API header, located at src/third_party/valgrind/valgrind.h
   This is released under the BSD license.

 - The Wasm C/C++ API headers, located at third_party/wasm-api/wasm.{h,hh}
   This is released under the Apache license. The API's upstream prototype
   implementation also formed the basis of V8's implementation in
   src/wasm/c-api.cc.

These libraries have their own licenses; we recommend you read them,
as their terms may differ from the terms below.

Further license information can be found in LICENSE files located in
sub-directories.

Copyright 2014, the V8 project authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
    notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
    copyright notice,
 this list of conditions and the following
    disclaimer in the documentation and/or other materials provided
    with the distribution.
  * Neither the name of Google Inc. nor the names of its
    contributors may be used to endorse or promote products derived
    from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING
 IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
#ifndef SRC_PERMISSION_WASI_PERMISSION_H_
#define SRC_PERMISSION_WASI_PERMISSION_H_

#if defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS

#include <vector>
#include "permission/permission_base.h"

namespace node {

namespace permission {

class WASIPermission final : public PermissionBase {
public:
 void Apply(Environment* env,
            const std::vector<std::string>& allow,
            PermissionScope scope) override;
 bool is_granted(Environment* env,
                 PermissionScope perm,
                 const std::string_view& param = "") const override;

```
private:
 bool deny_all_;
};

}  // namespace permission

}  // namespace node

#endif  // defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS
#endif  // SRC_PERMISSION_WASI_PERMISSION_H_
// Copyright 2016 The Chromium Authors
//
// Redistribution and use in source and binary forms, with or without
// modification, are permitted provided that the following conditions are
// met:
//
//    * Redistributions of source code must retain the above copyright
// notice, this list of conditions and the following disclaimer.
//    * Redistributions in binary form must reproduce the above
// copyright notice, this list of conditions and the following disclaimer
// in the documentation and/or other materials provided with the
// distribution.
//    * Neither the name of Google Inc. nor the names of its
// contributors may be used to endorse or promote products derived from
// this software without specific prior written permission.
//
// THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
// "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
// LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
// A PARTICULAR PURPOSE ARE DISCLAIMED.
 IN NO EVENT SHALL THE COPYRIGHT
// OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
// SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
// LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
// DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
// THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
// (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
// OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
{
 'variables': {
  'openssl_defines_BSD-x86_64': [
    'NDEBUG',
    'L_ENDIAN',
    'OPENSSL_BUILDING_OPENSSL',
    'OPENSSL_PIC',
  ],
  'openssl_cflags_BSD-x86_64': [
    '-Wall -O3',
```

```
  '-pthread',
  '-Wall -O3',
],
'openssl_ex_libs_BSD-x86_64': [
  '-pthread',
],
'openssl_cli_srcs_BSD-x86_64': [
  'openssl/apps/lib/cmp_mock_srv.c',
  'openssl/apps/asn1parse.c',
  'openssl/apps/ca.c',
  'openssl/apps/ciphers.c',
  'openssl/apps/cmp.c',
  'openssl/apps/cms.c',
  'openssl/apps/crl.c',
  'openssl/apps/crl2pkcs7.c',
  'openssl/apps/dgst.c',
  'openssl/apps/dhparam.c',
  'openssl/apps/dsa.c',
  'openssl/apps/dsaparam.c',
  'openssl/apps/ec.c',
  'openssl/apps/ecparam.c',
  'openssl/apps/enc.c',
  'openssl/apps/engine.c',
  'openssl/apps/errstr.c',
  'openssl/apps/fipsinstall.c',
  'openssl/apps/gendsa.c',
  'openssl/apps/genpkey.c',
  'openssl/apps/genrsa.c',
   'openssl/apps/info.c',
  'openssl/apps/kdf.c',
  'openssl/apps/list.c',
  'openssl/apps/mac.c',
  'openssl/apps/nseq.c',
  'openssl/apps/ocsp.c',
  'openssl/apps/openssl.c',
  'openssl/apps/passwd.c',
  'openssl/apps/pkcs12.c',
  'openssl/apps/pkcs7.c',
  'openssl/apps/pkcs8.c',
  'openssl/apps/pkey.c',
  'openssl/apps/pkeyparam.c',
  'openssl/apps/pkeyutl.c',
  'openssl/apps/prime.c',
  './config/archs/BSD-x86_64/no-asm/apps/progs.c',
  'openssl/apps/rand.c',
  'openssl/apps/rehash.c',
  'openssl/apps/req.c',
  'openssl/apps/rsa.c',
```

```
    'openssl/apps/rsautl.c',
    'openssl/apps/s_client.c',
    'openssl/apps/s_server.c',
    'openssl/apps/s_time.c',
    'openssl/apps/sess_id.c',
    'openssl/apps/smime.c',
    'openssl/apps/speed.c',
    'openssl/apps/spkac.c',
    'openssl/apps/srp.c',
    'openssl/apps/storeutl.c',
    'openssl/apps/ts.c',
    'openssl/apps/verify.c',
    'openssl/apps/version.c',
     'openssl/apps/x509.c',
    'openssl/apps/lib/app_libctx.c',
    'openssl/apps/lib/app_params.c',
    'openssl/apps/lib/app_provider.c',
    'openssl/apps/lib/app_rand.c',
    'openssl/apps/lib/app_x509.c',
    'openssl/apps/lib/apps.c',
    'openssl/apps/lib/apps_ui.c',
    'openssl/apps/lib/columns.c',
    'openssl/apps/lib/engine.c',
    'openssl/apps/lib/engine_loader.c',
    'openssl/apps/lib/fmt.c',
    'openssl/apps/lib/http_server.c',
    'openssl/apps/lib/names.c',
    'openssl/apps/lib/opt.c',
    'openssl/apps/lib/s_cb.c',
    'openssl/apps/lib/s_socket.c',
    'openssl/apps/lib/tlssrp_depr.c',
  ],
 },
 'defines': ['<@(openssl_defines_BSD-x86_64)'],
 'include_dirs': [
   './include',
 ],
 'cflags' : ['<@(openssl_cflags_BSD-x86_64)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],
 'sources': ['<@(openssl_cli_srcs_BSD-x86_64)'],
}
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/cms.h.in
*
* Copyright 2008-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
```

```
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_CMS_H
# define OPENSSL_CMS_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_CMS_H
# endif

# include <openssl/opensslconf.h>

# ifndef OPENSSL_NO_CMS
# include <openssl/x509.h>
# include <openssl/x509v3.h>
# include <openssl/cmserr.h>
# ifdef __cplusplus
extern "C" {
# endif

typedef struct CMS_ContentInfo_st CMS_ContentInfo;
typedef struct CMS_SignerInfo_st CMS_SignerInfo;
typedef struct CMS_CertificateChoices CMS_CertificateChoices;
typedef struct CMS_RevocationInfoChoice_st CMS_RevocationInfoChoice;
typedef
 struct CMS_RecipientInfo_st CMS_RecipientInfo;
typedef struct CMS_ReceiptRequest_st CMS_ReceiptRequest;
typedef struct CMS_Receipt_st CMS_Receipt;
typedef struct CMS_RecipientEncryptedKey_st CMS_RecipientEncryptedKey;
typedef struct CMS_OtherKeyAttribute_st CMS_OtherKeyAttribute;

SKM_DEFINE_STACK_OF_INTERNAL(CMS_SignerInfo, CMS_SignerInfo, CMS_SignerInfo)
#define sk_CMS_SignerInfo_num(sk) OPENSSL_sk_num(ossl_check_const_CMS_SignerInfo_sk_type(sk))
#define sk_CMS_SignerInfo_value(sk, idx) ((CMS_SignerInfo
*)OPENSSL_sk_value(ossl_check_const_CMS_SignerInfo_sk_type(sk), (idx)))
#define sk_CMS_SignerInfo_new(cmp) ((STACK_OF(CMS_SignerInfo)
*)OPENSSL_sk_new(ossl_check_CMS_SignerInfo_compfunc_type(cmp)))
#define sk_CMS_SignerInfo_new_null() ((STACK_OF(CMS_SignerInfo) *)OPENSSL_sk_new_null())
#define sk_CMS_SignerInfo_new_reserve(cmp, n) ((STACK_OF(CMS_SignerInfo)
*)OPENSSL_sk_new_reserve(ossl_check_CMS_SignerInfo_compfunc_type(cmp), (n)))
#define sk_CMS_SignerInfo_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_CMS_SignerInfo_sk_type(sk),
```

(n))
#define sk_CMS_SignerInfo_free(sk) OPENSSL_sk_free(ossl_check_CMS_SignerInfo_sk_type(sk))
#define sk_CMS_SignerInfo_zero(sk) OPENSSL_sk_zero(ossl_check_CMS_SignerInfo_sk_type(sk))
#define sk_CMS_SignerInfo_delete(sk, i) ((CMS_SignerInfo
*)OPENSSL_sk_delete(ossl_check_CMS_SignerInfo_sk_type(sk), (i)))
#define sk_CMS_SignerInfo_delete_ptr(sk, ptr) ((CMS_SignerInfo
*)OPENSSL_sk_delete_ptr(ossl_check_CMS_SignerInfo_sk_type(sk), ossl_check_CMS_SignerInfo_type(ptr)))
#define sk_CMS_SignerInfo_push(sk, ptr) OPENSSL_sk_push(ossl_check_CMS_SignerInfo_sk_type(sk),
ossl_check_CMS_SignerInfo_type(ptr))
#define sk_CMS_SignerInfo_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_CMS_SignerInfo_sk_type(sk),
ossl_check_CMS_SignerInfo_type(ptr))
#define sk_CMS_SignerInfo_pop(sk) ((CMS_SignerInfo
*)OPENSSL_sk_pop(ossl_check_CMS_SignerInfo_sk_type(sk)))
#define sk_CMS_SignerInfo_shift(sk) ((CMS_SignerInfo
*)OPENSSL_sk_shift(ossl_check_CMS_SignerInfo_sk_type(sk)))
#define
sk_CMS_SignerInfo_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_CMS_SignerInfo_sk_type(sk),ossl_check_CMS_SignerInfo_freefunc_type(fre
efunc))
#define sk_CMS_SignerInfo_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_CMS_SignerInfo_sk_type(sk),
ossl_check_CMS_SignerInfo_type(ptr), (idx))
#define sk_CMS_SignerInfo_set(sk, idx, ptr) ((CMS_SignerInfo
*)OPENSSL_sk_set(ossl_check_CMS_SignerInfo_sk_type(sk), (idx), ossl_check_CMS_SignerInfo_type(ptr)))
#define sk_CMS_SignerInfo_find(sk, ptr) OPENSSL_sk_find(ossl_check_CMS_SignerInfo_sk_type(sk),
ossl_check_CMS_SignerInfo_type(ptr))
#define sk_CMS_SignerInfo_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_CMS_SignerInfo_sk_type(sk),
ossl_check_CMS_SignerInfo_type(ptr))
#define sk_CMS_SignerInfo_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_CMS_SignerInfo_sk_type(sk), ossl_check_CMS_SignerInfo_type(ptr), pnum)
#define sk_CMS_SignerInfo_sort(sk) OPENSSL_sk_sort(ossl_check_CMS_SignerInfo_sk_type(sk))
#define sk_CMS_SignerInfo_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_CMS_SignerInfo_sk_type(sk))
#define sk_CMS_SignerInfo_dup(sk) ((STACK_OF(CMS_SignerInfo)
*)OPENSSL_sk_dup(ossl_check_const_CMS_SignerInfo_sk_type(sk)))
#define sk_CMS_SignerInfo_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(CMS_SignerInfo)
*)OPENSSL_sk_deep_copy(ossl_check_const_CMS_SignerInfo_sk_type(sk),
ossl_check_CMS_SignerInfo_copyfunc_type(copyfunc), ossl_check_CMS_SignerInfo_freefunc_type(freefunc)))
#define sk_CMS_SignerInfo_set_cmp_func(sk, cmp)
((sk_CMS_SignerInfo_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_CMS_SignerInfo_sk_type(sk),
ossl_check_CMS_SignerInfo_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(CMS_RecipientEncryptedKey, CMS_RecipientEncryptedKey,
CMS_RecipientEncryptedKey)
#define sk_CMS_RecipientEncryptedKey_num(sk)
OPENSSL_sk_num(ossl_check_const_CMS_RecipientEncryptedKey_sk_type(sk))
#define sk_CMS_RecipientEncryptedKey_value(sk, idx) ((CMS_RecipientEncryptedKey
*)OPENSSL_sk_value(ossl_check_const_CMS_RecipientEncryptedKey_sk_type(sk),
(idx)))
#define sk_CMS_RecipientEncryptedKey_new(cmp) ((STACK_OF(CMS_RecipientEncryptedKey)

*)OPENSSL_sk_new(ossl_check_CMS_RecipientEncryptedKey_compfunc_type(cmp)))
#define sk_CMS_RecipientEncryptedKey_new_null() ((STACK_OF(CMS_RecipientEncryptedKey)
*)OPENSSL_sk_new_null())
#define sk_CMS_RecipientEncryptedKey_new_reserve(cmp, n) ((STACK_OF(CMS_RecipientEncryptedKey)
*)OPENSSL_sk_new_reserve(ossl_check_CMS_RecipientEncryptedKey_compfunc_type(cmp), (n)))
#define sk_CMS_RecipientEncryptedKey_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk), (n))
#define sk_CMS_RecipientEncryptedKey_free(sk)
OPENSSL_sk_free(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk))
#define sk_CMS_RecipientEncryptedKey_zero(sk)
OPENSSL_sk_zero(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk))
#define sk_CMS_RecipientEncryptedKey_delete(sk, i) ((CMS_RecipientEncryptedKey
*)OPENSSL_sk_delete(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),
(i)))
#define sk_CMS_RecipientEncryptedKey_delete_ptr(sk, ptr) ((CMS_RecipientEncryptedKey
*)OPENSSL_sk_delete_ptr(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),
ossl_check_CMS_RecipientEncryptedKey_type(ptr)))
#define sk_CMS_RecipientEncryptedKey_push(sk, ptr)
OPENSSL_sk_push(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),
ossl_check_CMS_RecipientEncryptedKey_type(ptr))
#define sk_CMS_RecipientEncryptedKey_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),
ossl_check_CMS_RecipientEncryptedKey_type(ptr))
#define sk_CMS_RecipientEncryptedKey_pop(sk) ((CMS_RecipientEncryptedKey
*)OPENSSL_sk_pop(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk)))
#define sk_CMS_RecipientEncryptedKey_shift(sk) ((CMS_RecipientEncryptedKey
*)OPENSSL_sk_shift(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk)))
#define sk_CMS_RecipientEncryptedKey_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),ossl_check_CMS_RecipientEncry
ptedKey_freefunc_type(freefunc))
#define
sk_CMS_RecipientEncryptedKey_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),
ossl_check_CMS_RecipientEncryptedKey_type(ptr), (idx))
#define sk_CMS_RecipientEncryptedKey_set(sk, idx, ptr) ((CMS_RecipientEncryptedKey
*)OPENSSL_sk_set(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk), (idx),
ossl_check_CMS_RecipientEncryptedKey_type(ptr)))
#define sk_CMS_RecipientEncryptedKey_find(sk, ptr)
OPENSSL_sk_find(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),
ossl_check_CMS_RecipientEncryptedKey_type(ptr))
#define sk_CMS_RecipientEncryptedKey_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),
ossl_check_CMS_RecipientEncryptedKey_type(ptr))
#define sk_CMS_RecipientEncryptedKey_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk),
ossl_check_CMS_RecipientEncryptedKey_type(ptr), pnum)
#define sk_CMS_RecipientEncryptedKey_sort(sk)
OPENSSL_sk_sort(ossl_check_CMS_RecipientEncryptedKey_sk_type(sk))

#define
sk_CMS_RecipientEncryptedKey_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_CMS_RecipientEncryptedKey_sk_type(sk))
#define sk_CMS_RecipientEncryptedKey_dup(sk) ((STACK_OF(CMS_RecipientEncryptedKey)
*)OPENSSL_sk_dup(ossl_check_const_CMS_RecipientEncryptedKey_sk_type(sk)))
#define sk_CMS_RecipientEncryptedKey_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(CMS_RecipientEncryptedKey)
*)OPENSSL_sk_deep_copy(ossl_check_const_CMS_RecipientEncryptedKey_sk_type(sk),
ossl_check_CMS_RecipientEncryptedKey_copyfunc_type(copyfunc),
ossl_check_CMS_RecipientEncryptedKey_freefunc_type(freefunc)))
#define sk_CMS_RecipientEncryptedKey_set_cmp_func(sk, cmp)
((sk_CMS_RecipientEncryptedKey_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_CMS_RecipientEncrypted
Key_sk_type(sk), ossl_check_CMS_RecipientEncryptedKey_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(CMS_RecipientInfo, CMS_RecipientInfo, CMS_RecipientInfo)
#define sk_CMS_RecipientInfo_num(sk)
OPENSSL_sk_num(ossl_check_const_CMS_RecipientInfo_sk_type(sk))
#define sk_CMS_RecipientInfo_value(sk, idx) ((CMS_RecipientInfo
*)OPENSSL_sk_value(ossl_check_const_CMS_RecipientInfo_sk_type(sk), (idx)))
#define sk_CMS_RecipientInfo_new(cmp) ((STACK_OF(CMS_RecipientInfo)
*)OPENSSL_sk_new(ossl_check_CMS_RecipientInfo_compfunc_type(cmp)))
#define sk_CMS_RecipientInfo_new_null() ((STACK_OF(CMS_RecipientInfo) *)OPENSSL_sk_new_null())
#define sk_CMS_RecipientInfo_new_reserve(cmp, n) ((STACK_OF(CMS_RecipientInfo)
*)OPENSSL_sk_new_reserve(ossl_check_CMS_RecipientInfo_compfunc_type(cmp), (n)))
#define sk_CMS_RecipientInfo_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_CMS_RecipientInfo_sk_type(sk),
(n))
#define sk_CMS_RecipientInfo_free(sk) OPENSSL_sk_free(ossl_check_CMS_RecipientInfo_sk_type(sk))
#define sk_CMS_RecipientInfo_zero(sk) OPENSSL_sk_zero(ossl_check_CMS_RecipientInfo_sk_type(sk))
#define sk_CMS_RecipientInfo_delete(sk, i) ((CMS_RecipientInfo
*)OPENSSL_sk_delete(ossl_check_CMS_RecipientInfo_sk_type(sk),
(i)))
#define sk_CMS_RecipientInfo_delete_ptr(sk, ptr) ((CMS_RecipientInfo
*)OPENSSL_sk_delete_ptr(ossl_check_CMS_RecipientInfo_sk_type(sk),
ossl_check_CMS_RecipientInfo_type(ptr)))
#define sk_CMS_RecipientInfo_push(sk, ptr) OPENSSL_sk_push(ossl_check_CMS_RecipientInfo_sk_type(sk),
ossl_check_CMS_RecipientInfo_type(ptr))
#define sk_CMS_RecipientInfo_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_CMS_RecipientInfo_sk_type(sk), ossl_check_CMS_RecipientInfo_type(ptr))
#define sk_CMS_RecipientInfo_pop(sk) ((CMS_RecipientInfo
*)OPENSSL_sk_pop(ossl_check_CMS_RecipientInfo_sk_type(sk)))
#define sk_CMS_RecipientInfo_shift(sk) ((CMS_RecipientInfo
*)OPENSSL_sk_shift(ossl_check_CMS_RecipientInfo_sk_type(sk)))
#define sk_CMS_RecipientInfo_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_CMS_RecipientInfo_sk_type(sk),ossl_check_CMS_RecipientInfo_freefunc_ty
pe(freefunc))
#define sk_CMS_RecipientInfo_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_CMS_RecipientInfo_sk_type(sk),
ossl_check_CMS_RecipientInfo_type(ptr), (idx))
#define sk_CMS_RecipientInfo_set(sk, idx, ptr) ((CMS_RecipientInfo

*)OPENSSL_sk_set(ossl_check_CMS_RecipientInfo_sk_type(sk), (idx),
ossl_check_CMS_RecipientInfo_type(ptr)))
#define sk_CMS_RecipientInfo_find(sk, ptr) OPENSSL_sk_find(ossl_check_CMS_RecipientInfo_sk_type(sk),
ossl_check_CMS_RecipientInfo_type(ptr))
#define sk_CMS_RecipientInfo_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_CMS_RecipientInfo_sk_type(sk), ossl_check_CMS_RecipientInfo_type(ptr))
#define sk_CMS_RecipientInfo_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_CMS_RecipientInfo_sk_type(sk), ossl_check_CMS_RecipientInfo_type(ptr),
pnum)
#define sk_CMS_RecipientInfo_sort(sk) OPENSSL_sk_sort(ossl_check_CMS_RecipientInfo_sk_type(sk))
#define sk_CMS_RecipientInfo_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_CMS_RecipientInfo_sk_type(sk))
#define sk_CMS_RecipientInfo_dup(sk) ((STACK_OF(CMS_RecipientInfo)
*)OPENSSL_sk_dup(ossl_check_const_CMS_RecipientInfo_sk_type(sk)))
#define
sk_CMS_RecipientInfo_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(CMS_RecipientInfo)
*)OPENSSL_sk_deep_copy(ossl_check_const_CMS_RecipientInfo_sk_type(sk),
ossl_check_CMS_RecipientInfo_copyfunc_type(copyfunc),
ossl_check_CMS_RecipientInfo_freefunc_type(freefunc)))
#define sk_CMS_RecipientInfo_set_cmp_func(sk, cmp)
((sk_CMS_RecipientInfo_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_CMS_RecipientInfo_sk_type(sk),
ossl_check_CMS_RecipientInfo_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(CMS_RevocationInfoChoice, CMS_RevocationInfoChoice,
CMS_RevocationInfoChoice)
#define sk_CMS_RevocationInfoChoice_num(sk)
OPENSSL_sk_num(ossl_check_const_CMS_RevocationInfoChoice_sk_type(sk))
#define sk_CMS_RevocationInfoChoice_value(sk, idx) ((CMS_RevocationInfoChoice
*)OPENSSL_sk_value(ossl_check_const_CMS_RevocationInfoChoice_sk_type(sk), (idx)))
#define sk_CMS_RevocationInfoChoice_new(cmp) ((STACK_OF(CMS_RevocationInfoChoice)
*)OPENSSL_sk_new(ossl_check_CMS_RevocationInfoChoice_compfunc_type(cmp)))
#define
sk_CMS_RevocationInfoChoice_new_null() ((STACK_OF(CMS_RevocationInfoChoice)
*)OPENSSL_sk_new_null())
#define sk_CMS_RevocationInfoChoice_new_reserve(cmp, n) ((STACK_OF(CMS_RevocationInfoChoice)
*)OPENSSL_sk_new_reserve(ossl_check_CMS_RevocationInfoChoice_compfunc_type(cmp), (n)))
#define sk_CMS_RevocationInfoChoice_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_CMS_RevocationInfoChoice_sk_type(sk), (n))
#define sk_CMS_RevocationInfoChoice_free(sk)
OPENSSL_sk_free(ossl_check_CMS_RevocationInfoChoice_sk_type(sk))
#define sk_CMS_RevocationInfoChoice_zero(sk)
OPENSSL_sk_zero(ossl_check_CMS_RevocationInfoChoice_sk_type(sk))
#define sk_CMS_RevocationInfoChoice_delete(sk, i) ((CMS_RevocationInfoChoice
*)OPENSSL_sk_delete(ossl_check_CMS_RevocationInfoChoice_sk_type(sk), (i)))
#define sk_CMS_RevocationInfoChoice_delete_ptr(sk, ptr) ((CMS_RevocationInfoChoice
*)OPENSSL_sk_delete_ptr(ossl_check_CMS_RevocationInfoChoice_sk_type(sk),
ossl_check_CMS_RevocationInfoChoice_type(ptr)))
#define

```
 sk_CMS_RevocationInfoChoice_push(sk, ptr)
OPENSSL_sk_push(ossl_check_CMS_RevocationInfoChoice_sk_type(sk),
ossl_check_CMS_RevocationInfoChoice_type(ptr))
#define sk_CMS_RevocationInfoChoice_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_CMS_RevocationInfoChoice_sk_type(sk),
ossl_check_CMS_RevocationInfoChoice_type(ptr))
#define sk_CMS_RevocationInfoChoice_pop(sk) ((CMS_RevocationInfoChoice
*)OPENSSL_sk_pop(ossl_check_CMS_RevocationInfoChoice_sk_type(sk)))
#define sk_CMS_RevocationInfoChoice_shift(sk) ((CMS_RevocationInfoChoice
*)OPENSSL_sk_shift(ossl_check_CMS_RevocationInfoChoice_sk_type(sk)))
#define sk_CMS_RevocationInfoChoice_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_CMS_RevocationInfoChoice_sk_type(sk),ossl_check_CMS_RevocationInfoC
hoice_freefunc_type(freefunc))
#define sk_CMS_RevocationInfoChoice_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_CMS_RevocationInfoChoice_sk_type(sk),
ossl_check_CMS_RevocationInfoChoice_type(ptr), (idx))
#define
 sk_CMS_RevocationInfoChoice_set(sk, idx, ptr) ((CMS_RevocationInfoChoice
*)OPENSSL_sk_set(ossl_check_CMS_RevocationInfoChoice_sk_type(sk), (idx),
ossl_check_CMS_RevocationInfoChoice_type(ptr)))
#define sk_CMS_RevocationInfoChoice_find(sk, ptr)
OPENSSL_sk_find(ossl_check_CMS_RevocationInfoChoice_sk_type(sk),
ossl_check_CMS_RevocationInfoChoice_type(ptr))
#define sk_CMS_RevocationInfoChoice_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_CMS_RevocationInfoChoice_sk_type(sk),
ossl_check_CMS_RevocationInfoChoice_type(ptr))
#define sk_CMS_RevocationInfoChoice_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_CMS_RevocationInfoChoice_sk_type(sk),
ossl_check_CMS_RevocationInfoChoice_type(ptr), pnum)
#define sk_CMS_RevocationInfoChoice_sort(sk)
OPENSSL_sk_sort(ossl_check_CMS_RevocationInfoChoice_sk_type(sk))
#define sk_CMS_RevocationInfoChoice_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_CMS_RevocationInfoChoice_sk_type(sk))
#define sk_CMS_RevocationInfoChoice_dup(sk) ((STACK_OF(CMS_RevocationInfoChoice)
 *)OPENSSL_sk_dup(ossl_check_const_CMS_RevocationInfoChoice_sk_type(sk)))
#define sk_CMS_RevocationInfoChoice_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(CMS_RevocationInfoChoice)
*)OPENSSL_sk_deep_copy(ossl_check_const_CMS_RevocationInfoChoice_sk_type(sk),
ossl_check_CMS_RevocationInfoChoice_copyfunc_type(copyfunc),
ossl_check_CMS_RevocationInfoChoice_freefunc_type(freefunc)))
#define sk_CMS_RevocationInfoChoice_set_cmp_func(sk, cmp)
((sk_CMS_RevocationInfoChoice_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_CMS_RevocationInfoChoi
ce_sk_type(sk), ossl_check_CMS_RevocationInfoChoice_compfunc_type(cmp)))


DECLARE_ASN1_FUNCTIONS(CMS_ContentInfo)
DECLARE_ASN1_FUNCTIONS(CMS_ReceiptRequest)
DECLARE_ASN1_PRINT_FUNCTION(CMS_ContentInfo)
```

```
CMS_ContentInfo *CMS_ContentInfo_new_ex(OSSL_LIB_CTX *libctx, const char *propq);

# define CMS_SIGNERINFO_ISSUER_SERIAL    0
# define CMS_SIGNERINFO_KEYIDENTIFIER    1

# define CMS_RECIPINFO_NONE             -1
# define CMS_RECIPINFO_TRANS
          0
# define CMS_RECIPINFO_AGREE             1
# define CMS_RECIPINFO_KEK               2
# define CMS_RECIPINFO_PASS              3
# define CMS_RECIPINFO_OTHER             4

/* S/MIME related flags */

# define CMS_TEXT                    0x1
# define CMS_NOCERTS                 0x2
# define CMS_NO_CONTENT_VERIFY       0x4
# define CMS_NO_ATTR_VERIFY          0x8
# define CMS_NOSIGS                  \
                (CMS_NO_CONTENT_VERIFY|CMS_NO_ATTR_VERIFY)
# define CMS_NOINTERN                0x10
# define CMS_NO_SIGNER_CERT_VERIFY   0x20
# define CMS_NOVERIFY                0x20
# define CMS_DETACHED                0x40
# define CMS_BINARY                  0x80
# define CMS_NOATTR                  0x100
# define CMS_NOSMIMECAP              0x200
# define CMS_NOOLDMIMETYPE           0x400
# define CMS_CRLFEOL                 0x800
# define CMS_STREAM                  0x1000
# define CMS_NOCRL
              0x2000
# define CMS_PARTIAL                 0x4000
# define CMS_REUSE_DIGEST            0x8000
# define CMS_USE_KEYID               0x10000
# define CMS_DEBUG_DECRYPT           0x20000
# define CMS_KEY_PARAM               0x40000
# define CMS_ASCIICRLF               0x80000
# define CMS_CADES                   0x100000
# define CMS_USE_ORIGINATOR_KEYID    0x200000

const ASN1_OBJECT *CMS_get0_type(const CMS_ContentInfo *cms);

BIO *CMS_dataInit(CMS_ContentInfo *cms, BIO *icont);
int CMS_dataFinal(CMS_ContentInfo *cms, BIO *bio);
```

```
ASN1_OCTET_STRING **CMS_get0_content(CMS_ContentInfo *cms);
int CMS_is_detached(CMS_ContentInfo *cms);
int CMS_set_detached(CMS_ContentInfo *cms, int detached);

# ifdef OPENSSL_PEM_H
DECLARE_PEM_rw(CMS, CMS_ContentInfo)
# endif
int CMS_stream(unsigned char ***boundary, CMS_ContentInfo *cms);
CMS_ContentInfo *d2i_CMS_bio(BIO *bp, CMS_ContentInfo **cms);
int i2d_CMS_bio(BIO *bp, CMS_ContentInfo *cms);

BIO *BIO_new_CMS(BIO
 *out, CMS_ContentInfo *cms);
int i2d_CMS_bio_stream(BIO *out, CMS_ContentInfo *cms, BIO *in, int flags);
int PEM_write_bio_CMS_stream(BIO *out, CMS_ContentInfo *cms, BIO *in,
                             int flags);
CMS_ContentInfo *SMIME_read_CMS(BIO *bio, BIO **bcont);
CMS_ContentInfo *SMIME_read_CMS_ex(BIO *bio, int flags, BIO **bcont, CMS_ContentInfo **ci);
int SMIME_write_CMS(BIO *bio, CMS_ContentInfo *cms, BIO *data, int flags);

int CMS_final(CMS_ContentInfo *cms, BIO *data, BIO *dcont,
              unsigned int flags);

CMS_ContentInfo *CMS_sign(X509 *signcert, EVP_PKEY *pkey,
                          STACK_OF(X509) *certs, BIO *data,
                          unsigned int flags);
CMS_ContentInfo *CMS_sign_ex(X509 *signcert, EVP_PKEY *pkey,
                             STACK_OF(X509) *certs, BIO *data,
                             unsigned int flags, OSSL_LIB_CTX *ctx,
                             const char *propq);

CMS_ContentInfo *CMS_sign_receipt(CMS_SignerInfo
 *si,
                                  X509 *signcert, EVP_PKEY *pkey,
                                  STACK_OF(X509) *certs, unsigned int flags);

int CMS_data(CMS_ContentInfo *cms, BIO *out, unsigned int flags);
CMS_ContentInfo *CMS_data_create(BIO *in, unsigned int flags);
CMS_ContentInfo *CMS_data_create_ex(BIO *in, unsigned int flags,
                                    OSSL_LIB_CTX *ctx, const char *propq);

int CMS_digest_verify(CMS_ContentInfo *cms, BIO *dcont, BIO *out,
                      unsigned int flags);
CMS_ContentInfo *CMS_digest_create(BIO *in, const EVP_MD *md,
                                   unsigned int flags);
CMS_ContentInfo *CMS_digest_create_ex(BIO *in, const EVP_MD *md,
                                      unsigned int flags, OSSL_LIB_CTX *ctx,
                                      const char *propq);
```

```
int CMS_EncryptedData_decrypt(CMS_ContentInfo *cms,
                              const unsigned char *key, size_t keylen,

    BIO *dcont, BIO *out, unsigned int flags);

CMS_ContentInfo *CMS_EncryptedData_encrypt(BIO *in, const EVP_CIPHER *cipher,
                                           const unsigned char *key,
                                           size_t keylen, unsigned int flags);
CMS_ContentInfo *CMS_EncryptedData_encrypt_ex(BIO *in, const EVP_CIPHER *cipher,
                                              const unsigned char *key,
                                              size_t keylen, unsigned int flags,
                                              OSSL_LIB_CTX *ctx,
                                              const char *propq);

int CMS_EncryptedData_set1_key(CMS_ContentInfo *cms, const EVP_CIPHER *ciph,
                               const unsigned char *key, size_t keylen);

int CMS_verify(CMS_ContentInfo *cms, STACK_OF(X509) *certs,
               X509_STORE *store, BIO *dcont, BIO *out, unsigned int flags);

int CMS_verify_receipt(CMS_ContentInfo *rcms, CMS_ContentInfo *ocms,

                       STACK_OF(X509) *certs,
                       X509_STORE *store, unsigned int flags);

STACK_OF(X509) *CMS_get0_signers(CMS_ContentInfo *cms);

CMS_ContentInfo *CMS_encrypt(STACK_OF(X509) *certs, BIO *in,
                             const EVP_CIPHER *cipher, unsigned int flags);
CMS_ContentInfo *CMS_encrypt_ex(STACK_OF(X509) *certs, BIO *in,
                                const EVP_CIPHER *cipher, unsigned int flags,
                                OSSL_LIB_CTX *ctx, const char *propq);

int CMS_decrypt(CMS_ContentInfo *cms, EVP_PKEY *pkey, X509 *cert,
                BIO *dcont, BIO *out, unsigned int flags);

int CMS_decrypt_set1_pkey(CMS_ContentInfo *cms, EVP_PKEY *pk, X509 *cert);
int CMS_decrypt_set1_pkey_and_peer(CMS_ContentInfo *cms, EVP_PKEY *pk,
                                   X509 *cert, X509 *peer);
int CMS_decrypt_set1_key(CMS_ContentInfo *cms,
                         unsigned char *key, size_t keylen,
                         const unsigned char
 *id, size_t idlen);
int CMS_decrypt_set1_password(CMS_ContentInfo *cms,
                              unsigned char *pass, ossl_ssize_t passlen);

STACK_OF(CMS_RecipientInfo) *CMS_get0_RecipientInfos(CMS_ContentInfo *cms);
```

```
int CMS_RecipientInfo_type(CMS_RecipientInfo *ri);
EVP_PKEY_CTX *CMS_RecipientInfo_get0_pkey_ctx(CMS_RecipientInfo *ri);
CMS_ContentInfo *CMS_AuthEnvelopedData_create(const EVP_CIPHER *cipher);
CMS_ContentInfo *
CMS_AuthEnvelopedData_create_ex(const EVP_CIPHER *cipher, OSSL_LIB_CTX *ctx,
                                const char *propq);
CMS_ContentInfo *CMS_EnvelopedData_create(const EVP_CIPHER *cipher);
CMS_ContentInfo *CMS_EnvelopedData_create_ex(const EVP_CIPHER *cipher,
                                     OSSL_LIB_CTX *ctx,
                                     const char *propq);

CMS_RecipientInfo *CMS_add1_recipient_cert(CMS_ContentInfo *cms,
                                      X509 *recip, unsigned int flags);
CMS_RecipientInfo *CMS_add1_recipient(CMS_ContentInfo
 *cms, X509 *recip,
   EVP_PKEY *originatorPrivKey, X509 * originator, unsigned int flags);
int CMS_RecipientInfo_set0_pkey(CMS_RecipientInfo *ri, EVP_PKEY *pkey);
int CMS_RecipientInfo_ktri_cert_cmp(CMS_RecipientInfo *ri, X509 *cert);
int CMS_RecipientInfo_ktri_get0_algs(CMS_RecipientInfo *ri,
                                EVP_PKEY **pk, X509 **recip,
                                X509_ALGOR **palg);
int CMS_RecipientInfo_ktri_get0_signer_id(CMS_RecipientInfo *ri,
                                     ASN1_OCTET_STRING **keyid,
                                     X509_NAME **issuer,
                                     ASN1_INTEGER **sno);

CMS_RecipientInfo *CMS_add0_recipient_key(CMS_ContentInfo *cms, int nid,
                                     unsigned char *key, size_t keylen,
                                     unsigned char *id, size_t idlen,
                                     ASN1_GENERALIZEDTIME *date,
                                      ASN1_OBJECT *otherTypeId,
                                     ASN1_TYPE *otherType);

int CMS_RecipientInfo_kekri_get0_id(CMS_RecipientInfo *ri,
                               X509_ALGOR **palg,
                               ASN1_OCTET_STRING **pid,
                               ASN1_GENERALIZEDTIME **pdate,
                               ASN1_OBJECT **potherid,
                               ASN1_TYPE **pothertype);

int CMS_RecipientInfo_set0_key(CMS_RecipientInfo *ri,
                          unsigned char *key, size_t keylen);

int CMS_RecipientInfo_kekri_id_cmp(CMS_RecipientInfo *ri,
                              const unsigned char *id, size_t idlen);

int CMS_RecipientInfo_set0_password(CMS_RecipientInfo *ri,
                               unsigned char *pass,
```

```
                        ossl_ssize_t passlen);

CMS_RecipientInfo *CMS_add0_recipient_password(CMS_ContentInfo *cms,
                                    int iter, int wrap_nid,
                                    int pbe_nid,
                                    unsigned char *pass,
                                    ossl_ssize_t passlen,
                                    const EVP_CIPHER *kekciph);

int CMS_RecipientInfo_decrypt(CMS_ContentInfo *cms, CMS_RecipientInfo *ri);
int CMS_RecipientInfo_encrypt(const CMS_ContentInfo *cms, CMS_RecipientInfo *ri);

int CMS_uncompress(CMS_ContentInfo *cms, BIO *dcont, BIO *out,
            unsigned int flags);
CMS_ContentInfo *CMS_compress(BIO *in, int comp_nid, unsigned int flags);

int CMS_set1_eContentType(CMS_ContentInfo *cms, const ASN1_OBJECT *oid);
const ASN1_OBJECT *CMS_get0_eContentType(CMS_ContentInfo *cms);

CMS_CertificateChoices *CMS_add0_CertificateChoices(CMS_ContentInfo *cms);
int CMS_add0_cert(CMS_ContentInfo *cms, X509 *cert);
int CMS_add1_cert(CMS_ContentInfo *cms, X509 *cert);
STACK_OF(X509)
 *CMS_get1_certs(CMS_ContentInfo *cms);

CMS_RevocationInfoChoice *CMS_add0_RevocationInfoChoice(CMS_ContentInfo *cms);
int CMS_add0_crl(CMS_ContentInfo *cms, X509_CRL *crl);
int CMS_add1_crl(CMS_ContentInfo *cms, X509_CRL *crl);
STACK_OF(X509_CRL) *CMS_get1_crls(CMS_ContentInfo *cms);

int CMS_SignedData_init(CMS_ContentInfo *cms);
CMS_SignerInfo *CMS_add1_signer(CMS_ContentInfo *cms,
                        X509 *signer, EVP_PKEY *pk, const EVP_MD *md,
                        unsigned int flags);
EVP_PKEY_CTX *CMS_SignerInfo_get0_pkey_ctx(CMS_SignerInfo *si);
EVP_MD_CTX *CMS_SignerInfo_get0_md_ctx(CMS_SignerInfo *si);
STACK_OF(CMS_SignerInfo) *CMS_get0_SignerInfos(CMS_ContentInfo *cms);

void CMS_SignerInfo_set1_signer_cert(CMS_SignerInfo *si, X509 *signer);
int CMS_SignerInfo_get0_signer_id(CMS_SignerInfo *si,
                          ASN1_OCTET_STRING **keyid,
                          X509_NAME **issuer, ASN1_INTEGER **sno);
int CMS_SignerInfo_cert_cmp(CMS_SignerInfo
 *si, X509 *cert);
int CMS_set1_signers_certs(CMS_ContentInfo *cms, STACK_OF(X509) *certs,
                    unsigned int flags);
void CMS_SignerInfo_get0_algs(CMS_SignerInfo *si, EVP_PKEY **pk,
                        X509 **signer, X509_ALGOR **pdig,
```

```
                        X509_ALGOR **psig);
ASN1_OCTET_STRING *CMS_SignerInfo_get0_signature(CMS_SignerInfo *si);
int CMS_SignerInfo_sign(CMS_SignerInfo *si);
int CMS_SignerInfo_verify(CMS_SignerInfo *si);
int CMS_SignerInfo_verify_content(CMS_SignerInfo *si, BIO *chain);

int CMS_add_smimecap(CMS_SignerInfo *si, STACK_OF(X509_ALGOR) *algs);
int CMS_add_simple_smimecap(STACK_OF(X509_ALGOR) **algs,
                        int algnid, int keysize);
int CMS_add_standard_smimecap(STACK_OF(X509_ALGOR) **smcap);

int CMS_signed_get_attr_count(const CMS_SignerInfo *si);
int CMS_signed_get_attr_by_NID(const CMS_SignerInfo *si, int nid,
                        int lastpos);
int CMS_signed_get_attr_by_OBJ(const
 CMS_SignerInfo *si, const ASN1_OBJECT *obj,
                        int lastpos);
X509_ATTRIBUTE *CMS_signed_get_attr(const CMS_SignerInfo *si, int loc);
X509_ATTRIBUTE *CMS_signed_delete_attr(CMS_SignerInfo *si, int loc);
int CMS_signed_add1_attr(CMS_SignerInfo *si, X509_ATTRIBUTE *attr);
int CMS_signed_add1_attr_by_OBJ(CMS_SignerInfo *si,
                        const ASN1_OBJECT *obj, int type,
                        const void *bytes, int len);
int CMS_signed_add1_attr_by_NID(CMS_SignerInfo *si,
                        int nid, int type,
                        const void *bytes, int len);
int CMS_signed_add1_attr_by_txt(CMS_SignerInfo *si,
                        const char *attrname, int type,
                        const void *bytes, int len);
void *CMS_signed_get0_data_by_OBJ(const CMS_SignerInfo *si,
                         const ASN1_OBJECT *oid,

  int lastpos, int type);

int CMS_unsigned_get_attr_count(const CMS_SignerInfo *si);
int CMS_unsigned_get_attr_by_NID(const CMS_SignerInfo *si, int nid,
                        int lastpos);
int CMS_unsigned_get_attr_by_OBJ(const CMS_SignerInfo *si,
                        const ASN1_OBJECT *obj, int lastpos);
X509_ATTRIBUTE *CMS_unsigned_get_attr(const CMS_SignerInfo *si, int loc);
X509_ATTRIBUTE *CMS_unsigned_delete_attr(CMS_SignerInfo *si, int loc);
int CMS_unsigned_add1_attr(CMS_SignerInfo *si, X509_ATTRIBUTE *attr);
int CMS_unsigned_add1_attr_by_OBJ(CMS_SignerInfo *si,
                         const ASN1_OBJECT *obj, int type,
                         const void *bytes, int len);
int CMS_unsigned_add1_attr_by_NID(CMS_SignerInfo *si,
                         int nid, int type,
                         const void *bytes, int len);
```

```
int CMS_unsigned_add1_attr_by_txt(CMS_SignerInfo *si,
                                  const char
 *attrname, int type,
                                  const void *bytes, int len);
void *CMS_unsigned_get0_data_by_OBJ(CMS_SignerInfo *si, ASN1_OBJECT *oid,
                                    int lastpos, int type);

int CMS_get1_ReceiptRequest(CMS_SignerInfo *si, CMS_ReceiptRequest **prr);
CMS_ReceiptRequest *CMS_ReceiptRequest_create0(
  unsigned char *id, int idlen, int allorfirst,
  STACK_OF(GENERAL_NAMES) *receiptList,
  STACK_OF(GENERAL_NAMES) *receiptsTo);
CMS_ReceiptRequest *CMS_ReceiptRequest_create0_ex(
  unsigned char *id, int idlen, int allorfirst,
  STACK_OF(GENERAL_NAMES) *receiptList,
  STACK_OF(GENERAL_NAMES) *receiptsTo,
  OSSL_LIB_CTX *ctx);

int CMS_add1_ReceiptRequest(CMS_SignerInfo *si, CMS_ReceiptRequest *rr);
void CMS_ReceiptRequest_get0_values(CMS_ReceiptRequest *rr,
                                    ASN1_STRING **pcid,
                                    int *pallorfirst,
                                    STACK_OF(GENERAL_NAMES) **plist,

                                   STACK_OF(GENERAL_NAMES) **prto);
int CMS_RecipientInfo_kari_get0_alg(CMS_RecipientInfo *ri,
                                    X509_ALGOR **palg,
                                    ASN1_OCTET_STRING **pukm);
STACK_OF(CMS_RecipientEncryptedKey)
*CMS_RecipientInfo_kari_get0_reks(CMS_RecipientInfo *ri);

int CMS_RecipientInfo_kari_get0_orig_id(CMS_RecipientInfo *ri,
                                        X509_ALGOR **pubalg,
                                        ASN1_BIT_STRING **pubkey,
                                        ASN1_OCTET_STRING **keyid,
                                        X509_NAME **issuer,
                                        ASN1_INTEGER **sno);

int CMS_RecipientInfo_kari_orig_id_cmp(CMS_RecipientInfo *ri, X509 *cert);

int CMS_RecipientEncryptedKey_get0_id(CMS_RecipientEncryptedKey *rek,
                                      ASN1_OCTET_STRING **keyid,
                                      ASN1_GENERALIZEDTIME **tm,

                                     CMS_OtherKeyAttribute **other,
                                      X509_NAME **issuer, ASN1_INTEGER **sno);
int CMS_RecipientEncryptedKey_cert_cmp(CMS_RecipientEncryptedKey *rek,
                                       X509 *cert);
```

```
int CMS_RecipientInfo_kari_set0_pkey(CMS_RecipientInfo *ri, EVP_PKEY *pk);
int CMS_RecipientInfo_kari_set0_pkey_and_peer(CMS_RecipientInfo *ri, EVP_PKEY *pk, X509 *peer);
EVP_CIPHER_CTX *CMS_RecipientInfo_kari_get0_ctx(CMS_RecipientInfo *ri);
int CMS_RecipientInfo_kari_decrypt(CMS_ContentInfo *cms,
                                   CMS_RecipientInfo *ri,
                                   CMS_RecipientEncryptedKey *rek);

int CMS_SharedInfo_encode(unsigned char **pder, X509_ALGOR *kekalg,
                          ASN1_OCTET_STRING *ukm, int keylen);

/* Backward compatibility for spelling errors. */
# define CMS_R_UNKNOWN_DIGEST_ALGORITM CMS_R_UNKNOWN_DIGEST_ALGORITHM
# define CMS_R_UNSUPPORTED_RECPIENTINFO_TYPE \
  CMS_R_UNSUPPORTED_RECIPIENTINFO_TYPE

#
 ifdef  __cplusplus
}
#  endif
# endif
#endif
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/asn1.h.in
*
* Copyright 1995-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_ASN1_H
# define OPENSSL_ASN1_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_ASN1_H
# endif

# include <time.h>
# include <openssl/e_os2.h>
# include <openssl/opensslconf.h>
# include <openssl/bio.h>
```

```
# include <openssl/safestack.h>
# include <openssl/asn1err.h>
# include <openssl/symhacks.h>

# include <openssl/types.h>
# include <openssl/bn.h>

# ifdef OPENSSL_BUILD_SHLIBCRYPTO
#  undef OPENSSL_EXTERN
#  define OPENSSL_EXTERN OPENSSL_EXPORT
# endif

#ifdef  __cplusplus
extern "C" {
#endif

# define V_ASN1_UNIVERSAL
            0x00
# define V_ASN1_APPLICATION             0x40
# define V_ASN1_CONTEXT_SPECIFIC        0x80
# define V_ASN1_PRIVATE                 0xc0

# define V_ASN1_CONSTRUCTED             0x20
# define V_ASN1_PRIMITIVE_TAG           0x1f
# define V_ASN1_PRIMATIVE_TAG /*compat*/ V_ASN1_PRIMITIVE_TAG

# define V_ASN1_APP_CHOOSE              -2/* let the recipient choose */
# define V_ASN1_OTHER                   -3/* used in ASN1_TYPE */
# define V_ASN1_ANY                     -4/* used in ASN1 template code */

# define V_ASN1_UNDEF                   -1
/* ASN.1 tag values */
# define V_ASN1_EOC                     0
# define V_ASN1_BOOLEAN                 1 /**/
# define V_ASN1_INTEGER                 2
# define V_ASN1_BIT_STRING              3
# define V_ASN1_OCTET_STRING            4
# define V_ASN1_NULL                    5
# define V_ASN1_OBJECT                  6
# define V_ASN1_OBJECT_DESCRIPTOR       7
# define V_ASN1_EXTERNAL                8
#
 define V_ASN1_REAL                     9
# define V_ASN1_ENUMERATED              10
# define V_ASN1_UTF8STRING              12
# define V_ASN1_SEQUENCE                16
# define V_ASN1_SET                     17
# define V_ASN1_NUMERICSTRING           18 /**/
```

```
# define V_ASN1_PRINTABLESTRING         19
# define V_ASN1_T61STRING               20
# define V_ASN1_TELETEXSTRING           20/* alias */
# define V_ASN1_VIDEOTEXSTRING          21 /**/
# define V_ASN1_IA5STRING               22
# define V_ASN1_UTCTIME                 23
# define V_ASN1_GENERALIZEDTIME         24 /**/
# define V_ASN1_GRAPHICSTRING           25 /**/
# define V_ASN1_ISO64STRING             26 /**/
# define V_ASN1_VISIBLESTRING           26/* alias */
# define V_ASN1_GENERALSTRING           27 /**/
# define V_ASN1_UNIVERSALSTRING         28 /**/
# define V_ASN1_BMPSTRING               30

/*
* NB the constants below are used internally by ASN1_INTEGER
* and ASN1_ENUMERATED to indicate the sign.
 They are *not* on
* the wire tag values.
*/

# define V_ASN1_NEG                     0x100
# define V_ASN1_NEG_INTEGER             (2 | V_ASN1_NEG)
# define V_ASN1_NEG_ENUMERATED          (10 | V_ASN1_NEG)

/* For use with d2i_ASN1_type_bytes() */
# define B_ASN1_NUMERICSTRING    0x0001
# define B_ASN1_PRINTABLESTRING  0x0002
# define B_ASN1_T61STRING        0x0004
# define B_ASN1_TELETEXSTRING    0x0004
# define B_ASN1_VIDEOTEXSTRING   0x0008
# define B_ASN1_IA5STRING        0x0010
# define B_ASN1_GRAPHICSTRING    0x0020
# define B_ASN1_ISO64STRING      0x0040
# define B_ASN1_VISIBLESTRING    0x0040
# define B_ASN1_GENERALSTRING    0x0080
# define B_ASN1_UNIVERSALSTRING  0x0100
# define B_ASN1_OCTET_STRING     0x0200
# define B_ASN1_BIT_STRING       0x0400
# define B_ASN1_BMPSTRING        0x0800
# define B_ASN1_UNKNOWN          0x1000
# define B_ASN1_UTF8STRING       0x2000
# define B_ASN1_UTCTIME          0x4000
# define B_ASN1_GENERALIZEDTIME  0x8000
# define B_ASN1_SEQUENCE
        0x10000
/* For use with ASN1_mbstring_copy() */
# define MBSTRING_FLAG           0x1000
```

```
# define MBSTRING_UTF8          (MBSTRING_FLAG)
# define MBSTRING_ASC           (MBSTRING_FLAG|1)
# define MBSTRING_BMP           (MBSTRING_FLAG|2)
# define MBSTRING_UNIV          (MBSTRING_FLAG|4)
# define SMIME_OLDMIME          0x400
# define SMIME_CRLFEOL          0x800
# define SMIME_STREAM           0x1000

/* Stacks for types not otherwise defined in this header */
SKM_DEFINE_STACK_OF_INTERNAL(X509_ALGOR, X509_ALGOR, X509_ALGOR)
#define sk_X509_ALGOR_num(sk) OPENSSL_sk_num(ossl_check_const_X509_ALGOR_sk_type(sk))
#define sk_X509_ALGOR_value(sk, idx) ((X509_ALGOR
*)OPENSSL_sk_value(ossl_check_const_X509_ALGOR_sk_type(sk), (idx)))
#define sk_X509_ALGOR_new(cmp) ((STACK_OF(X509_ALGOR)
*)OPENSSL_sk_new(ossl_check_X509_ALGOR_compfunc_type(cmp)))
#define sk_X509_ALGOR_new_null() ((STACK_OF(X509_ALGOR) *)OPENSSL_sk_new_null())
#define sk_X509_ALGOR_new_reserve(cmp, n) ((STACK_OF(X509_ALGOR)
 *)OPENSSL_sk_new_reserve(ossl_check_X509_ALGOR_compfunc_type(cmp), (n)))
#define sk_X509_ALGOR_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_ALGOR_sk_type(sk), (n))
#define sk_X509_ALGOR_free(sk) OPENSSL_sk_free(ossl_check_X509_ALGOR_sk_type(sk))
#define sk_X509_ALGOR_zero(sk) OPENSSL_sk_zero(ossl_check_X509_ALGOR_sk_type(sk))
#define sk_X509_ALGOR_delete(sk, i) ((X509_ALGOR
*)OPENSSL_sk_delete(ossl_check_X509_ALGOR_sk_type(sk), (i)))
#define sk_X509_ALGOR_delete_ptr(sk, ptr) ((X509_ALGOR
*)OPENSSL_sk_delete_ptr(ossl_check_X509_ALGOR_sk_type(sk), ossl_check_X509_ALGOR_type(ptr)))
#define sk_X509_ALGOR_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_ALGOR_sk_type(sk),
ossl_check_X509_ALGOR_type(ptr))
#define sk_X509_ALGOR_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_ALGOR_sk_type(sk),
ossl_check_X509_ALGOR_type(ptr))
#define sk_X509_ALGOR_pop(sk) ((X509_ALGOR
*)OPENSSL_sk_pop(ossl_check_X509_ALGOR_sk_type(sk)))
#define sk_X509_ALGOR_shift(sk) ((X509_ALGOR
*)OPENSSL_sk_shift(ossl_check_X509_ALGOR_sk_type(sk)))
#define
 sk_X509_ALGOR_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_ALGOR_sk_type(sk),ossl_check_X509_ALGOR_freefunc_type(freefu
nc))
#define sk_X509_ALGOR_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_ALGOR_sk_type(sk),
ossl_check_X509_ALGOR_type(ptr), (idx))
#define sk_X509_ALGOR_set(sk, idx, ptr) ((X509_ALGOR
*)OPENSSL_sk_set(ossl_check_X509_ALGOR_sk_type(sk), (idx), ossl_check_X509_ALGOR_type(ptr)))
#define sk_X509_ALGOR_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_ALGOR_sk_type(sk),
ossl_check_X509_ALGOR_type(ptr))
#define sk_X509_ALGOR_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_ALGOR_sk_type(sk),
ossl_check_X509_ALGOR_type(ptr))
#define sk_X509_ALGOR_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_X509_ALGOR_sk_type(sk),
ossl_check_X509_ALGOR_type(ptr), pnum)
#define sk_X509_ALGOR_sort(sk) OPENSSL_sk_sort(ossl_check_X509_ALGOR_sk_type(sk))
```

```
#define sk_X509_ALGOR_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_X509_ALGOR_sk_type(sk))
#define
 sk_X509_ALGOR_dup(sk) ((STACK_OF(X509_ALGOR)
*)OPENSSL_sk_dup(ossl_check_const_X509_ALGOR_sk_type(sk)))
#define sk_X509_ALGOR_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_ALGOR)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_ALGOR_sk_type(sk),
ossl_check_X509_ALGOR_copyfunc_type(copyfunc), ossl_check_X509_ALGOR_freefunc_type(freefunc)))
#define sk_X509_ALGOR_set_cmp_func(sk, cmp)
((sk_X509_ALGOR_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_ALGOR_sk_type(sk),
ossl_check_X509_ALGOR_compfunc_type(cmp)))



# define ASN1_STRING_FLAG_BITS_LEFT 0x08/* Set if 0x07 has bits left value */
/*
* This indicates that the ASN1_STRING is not a real value but just a place
* holder for the location where indefinite length constructed data should be
* inserted in the memory buffer
*/
# define ASN1_STRING_FLAG_NDEF 0x010

/*
* This flag is used by the CMS code to indicate that a string is not
* complete and is a place holder for content when it had
 all been accessed.
* The flag will be reset when content has been written to it.
*/

# define ASN1_STRING_FLAG_CONT 0x020
/*
* This flag is used by ASN1 code to indicate an ASN1_STRING is an MSTRING
* type.
*/
# define ASN1_STRING_FLAG_MSTRING 0x040
/* String is embedded and only content should be freed */
# define ASN1_STRING_FLAG_EMBED 0x080
/* String should be parsed in RFC 5280's time format */
# define ASN1_STRING_FLAG_X509_TIME 0x100
/* This is the base type that holds just about everything :-) */
struct asn1_string_st {
  int length;
  int type;
  unsigned char *data;
  /*
   * The value of the following field depends on the type being held.  It
   * is mostly being used for BIT_STRING so if the input data has a
   * non-zero 'unused bits' value, it will be handled correctly
   */
```

```
  long flags;
};

/*
* ASN1_ENCODING structure: this is used to save the received encoding of an
* ASN1 type. This is useful to get round problems with invalid encodings
* which
 can break signatures.
*/

typedef struct ASN1_ENCODING_st {
  unsigned char *enc;        /* DER encoding */
  long len;                  /* Length of encoding */
  int modified;              /* set to 1 if 'enc' is invalid */
} ASN1_ENCODING;

/* Used with ASN1 LONG type: if a long is set to this it is omitted */
# define ASN1_LONG_UNDEF 0x7fffffffL

# define STABLE_FLAGS_MALLOC     0x01
/*
* A zero passed to ASN1_STRING_TABLE_new_add for the flags is interpreted
* as "don't change" and STABLE_FLAGS_MALLOC is always set. By setting
* STABLE_FLAGS_MALLOC only we can clear the existing value. Use the alias
* STABLE_FLAGS_CLEAR to reflect this.
*/
# define STABLE_FLAGS_CLEAR      STABLE_FLAGS_MALLOC
# define STABLE_NO_MASK          0x02
# define DIRSTRING_TYPE  \
(B_ASN1_PRINTABLESTRING|B_ASN1_T61STRING|B_ASN1_BMPSTRING|B_ASN1_UTF8STRING)
# define PKCS9STRING_TYPE (DIRSTRING_TYPE|B_ASN1_IA5STRING)

struct asn1_string_table_st {
  int nid;
  long minsize;
  long maxsize;
   unsigned long mask;
  unsigned long flags;
};

SKM_DEFINE_STACK_OF_INTERNAL(ASN1_STRING_TABLE, ASN1_STRING_TABLE,
ASN1_STRING_TABLE)
#define sk_ASN1_STRING_TABLE_num(sk)
OPENSSL_sk_num(ossl_check_const_ASN1_STRING_TABLE_sk_type(sk))
#define sk_ASN1_STRING_TABLE_value(sk, idx) ((ASN1_STRING_TABLE
*)OPENSSL_sk_value(ossl_check_const_ASN1_STRING_TABLE_sk_type(sk), (idx)))
#define sk_ASN1_STRING_TABLE_new(cmp) ((STACK_OF(ASN1_STRING_TABLE)
*)OPENSSL_sk_new(ossl_check_ASN1_STRING_TABLE_compfunc_type(cmp)))
```

```
#define sk_ASN1_STRING_TABLE_new_null() ((STACK_OF(ASN1_STRING_TABLE)
*)OPENSSL_sk_new_null())
#define sk_ASN1_STRING_TABLE_new_reserve(cmp, n) ((STACK_OF(ASN1_STRING_TABLE)
*)OPENSSL_sk_new_reserve(ossl_check_ASN1_STRING_TABLE_compfunc_type(cmp), (n)))
#define sk_ASN1_STRING_TABLE_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_ASN1_STRING_TABLE_sk_type(sk), (n))
#define sk_ASN1_STRING_TABLE_free(sk)
OPENSSL_sk_free(ossl_check_ASN1_STRING_TABLE_sk_type(sk))
#define sk_ASN1_STRING_TABLE_zero(sk)
 OPENSSL_sk_zero(ossl_check_ASN1_STRING_TABLE_sk_type(sk))
#define sk_ASN1_STRING_TABLE_delete(sk, i) ((ASN1_STRING_TABLE
*)OPENSSL_sk_delete(ossl_check_ASN1_STRING_TABLE_sk_type(sk), (i)))
#define sk_ASN1_STRING_TABLE_delete_ptr(sk, ptr) ((ASN1_STRING_TABLE
*)OPENSSL_sk_delete_ptr(ossl_check_ASN1_STRING_TABLE_sk_type(sk),
ossl_check_ASN1_STRING_TABLE_type(ptr)))
#define sk_ASN1_STRING_TABLE_push(sk, ptr)
OPENSSL_sk_push(ossl_check_ASN1_STRING_TABLE_sk_type(sk),
ossl_check_ASN1_STRING_TABLE_type(ptr))
#define sk_ASN1_STRING_TABLE_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_ASN1_STRING_TABLE_sk_type(sk),
ossl_check_ASN1_STRING_TABLE_type(ptr))
#define sk_ASN1_STRING_TABLE_pop(sk) ((ASN1_STRING_TABLE
*)OPENSSL_sk_pop(ossl_check_ASN1_STRING_TABLE_sk_type(sk)))
#define sk_ASN1_STRING_TABLE_shift(sk) ((ASN1_STRING_TABLE
*)OPENSSL_sk_shift(ossl_check_ASN1_STRING_TABLE_sk_type(sk)))
#define sk_ASN1_STRING_TABLE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ASN1_STRING_TABLE_sk_type(sk),ossl_check_ASN1_STRING_TABLE_
freefunc_type(freefunc))
#define
 sk_ASN1_STRING_TABLE_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_ASN1_STRING_TABLE_sk_type(sk),
ossl_check_ASN1_STRING_TABLE_type(ptr), (idx))
#define sk_ASN1_STRING_TABLE_set(sk, idx, ptr) ((ASN1_STRING_TABLE
*)OPENSSL_sk_set(ossl_check_ASN1_STRING_TABLE_sk_type(sk), (idx),
ossl_check_ASN1_STRING_TABLE_type(ptr)))
#define sk_ASN1_STRING_TABLE_find(sk, ptr)
OPENSSL_sk_find(ossl_check_ASN1_STRING_TABLE_sk_type(sk),
ossl_check_ASN1_STRING_TABLE_type(ptr))
#define sk_ASN1_STRING_TABLE_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_ASN1_STRING_TABLE_sk_type(sk),
ossl_check_ASN1_STRING_TABLE_type(ptr))
#define sk_ASN1_STRING_TABLE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ASN1_STRING_TABLE_sk_type(sk),
ossl_check_ASN1_STRING_TABLE_type(ptr), pnum)
#define sk_ASN1_STRING_TABLE_sort(sk)
OPENSSL_sk_sort(ossl_check_ASN1_STRING_TABLE_sk_type(sk))
#define sk_ASN1_STRING_TABLE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_ASN1_STRING_TABLE_sk_type(sk))
```

```
#define
 sk_ASN1_STRING_TABLE_dup(sk) ((STACK_OF(ASN1_STRING_TABLE)
*)OPENSSL_sk_dup(ossl_check_const_ASN1_STRING_TABLE_sk_type(sk)))
#define sk_ASN1_STRING_TABLE_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ASN1_STRING_TABLE)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASN1_STRING_TABLE_sk_type(sk),
ossl_check_ASN1_STRING_TABLE_copyfunc_type(copyfunc),
ossl_check_ASN1_STRING_TABLE_freefunc_type(freefunc)))
#define sk_ASN1_STRING_TABLE_set_cmp_func(sk, cmp)
((sk_ASN1_STRING_TABLE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASN1_STRING_TABLE_sk_t
ype(sk), ossl_check_ASN1_STRING_TABLE_compfunc_type(cmp)))


/* size limits: this stuff is taken straight from RFC2459 */

# define ub_name                        32768
# define ub_common_name                 64
# define ub_locality_name               128
# define ub_state_name                  128
# define ub_organization_name           64
# define ub_organization_unit_name      64
#
 define ub_title                       64
# define ub_email_address               128

/*
* Declarations for template structures: for full definitions see asn1t.h
*/
typedef struct ASN1_TEMPLATE_st ASN1_TEMPLATE;
typedef struct ASN1_TLC_st ASN1_TLC;
/* This is just an opaque pointer */
typedef struct ASN1_VALUE_st ASN1_VALUE;

/* Declare ASN1 functions: the implement macro in in asn1t.h */

/*
* The mysterious 'extern' that's passed to some macros is innocuous,
* and is there to quiet pre-C99 compilers that may complain about empty
* arguments in macro calls.
*/

# define DECLARE_ASN1_FUNCTIONS_attr(attr, type)                        \
  DECLARE_ASN1_FUNCTIONS_name_attr(attr, type, type)
# define DECLARE_ASN1_FUNCTIONS(type)                                   \
  DECLARE_ASN1_FUNCTIONS_attr(extern, type)

# define DECLARE_ASN1_ALLOC_FUNCTIONS_attr(attr, type)                  \
  DECLARE_ASN1_ALLOC_FUNCTIONS_name_attr(attr, type, type)
# define DECLARE_ASN1_ALLOC_FUNCTIONS(type)
```

```
                        \
  DECLARE_ASN1_ALLOC_FUNCTIONS_attr(extern, type)

# define DECLARE_ASN1_FUNCTIONS_name_attr(attr, type, name)              \
  DECLARE_ASN1_ALLOC_FUNCTIONS_name_attr(attr, type, name)             \
  DECLARE_ASN1_ENCODE_FUNCTIONS_name_attr(attr, type, name)
# define DECLARE_ASN1_FUNCTIONS_name(type, name)                        \
  DECLARE_ASN1_FUNCTIONS_name_attr(extern, type, name)

# define DECLARE_ASN1_ENCODE_FUNCTIONS_attr(attr, type, itname, name)      \
  DECLARE_ASN1_ENCODE_FUNCTIONS_only_attr(attr, type, name)             \
  DECLARE_ASN1_ITEM_attr(attr, itname)
# define DECLARE_ASN1_ENCODE_FUNCTIONS(type, itname, name)               \
  DECLARE_ASN1_ENCODE_FUNCTIONS_attr(extern, type, itname, name)

# define DECLARE_ASN1_ENCODE_FUNCTIONS_name_attr(attr, type, name)        \
  DECLARE_ASN1_ENCODE_FUNCTIONS_attr(attr, type, name, name)
# define DECLARE_ASN1_ENCODE_FUNCTIONS_name(type, name)
 \
  DECLARE_ASN1_ENCODE_FUNCTIONS_name_attr(extern, type, name)

# define DECLARE_ASN1_ENCODE_FUNCTIONS_only_attr(attr, type, name)        \
  attr type *d2i_##name(type **a, const unsigned char **in, long len);    \
  attr int i2d_##name(const type *a, unsigned char **out);
# define DECLARE_ASN1_ENCODE_FUNCTIONS_only(type, name)                  \
  DECLARE_ASN1_ENCODE_FUNCTIONS_only_attr(extern, type, name)

# define DECLARE_ASN1_NDEF_FUNCTION_attr(attr, name)                     \
  attr int i2d_##name##_NDEF(const name *a, unsigned char **out);
# define DECLARE_ASN1_NDEF_FUNCTION(name)                               \
  DECLARE_ASN1_NDEF_FUNCTION_attr(extern, name)

# define DECLARE_ASN1_ALLOC_FUNCTIONS_name_attr(attr, type, name)         \
  attr type *name##_new(void);                                          \
  attr void name##_free(type *a);
# define DECLARE_ASN1_ALLOC_FUNCTIONS_name(type, name)                   \
  DECLARE_ASN1_ALLOC_FUNCTIONS_name_attr(extern,
 type, name)

# define DECLARE_ASN1_DUP_FUNCTION_attr(attr, type)                      \
  DECLARE_ASN1_DUP_FUNCTION_name_attr(attr, type, type)
# define DECLARE_ASN1_DUP_FUNCTION(type)                                \
  DECLARE_ASN1_DUP_FUNCTION_attr(extern, type)

# define DECLARE_ASN1_DUP_FUNCTION_name_attr(attr, type, name)           \
  attr type *name##_dup(const type *a);
# define DECLARE_ASN1_DUP_FUNCTION_name(type, name)                      \
  DECLARE_ASN1_DUP_FUNCTION_name_attr(extern, type, name)
```

```
# define DECLARE_ASN1_PRINT_FUNCTION_attr(attr, stname)                  \
  DECLARE_ASN1_PRINT_FUNCTION_fname_attr(attr, stname, stname)
# define DECLARE_ASN1_PRINT_FUNCTION(stname)                             \
  DECLARE_ASN1_PRINT_FUNCTION_attr(extern, stname)

# define DECLARE_ASN1_PRINT_FUNCTION_fname_attr(attr, stname, fname)      \
  attr int fname##_print_ctx(BIO *out, const stname *x, int indent,      \

                     const ASN1_PCTX *pctx);
# define DECLARE_ASN1_PRINT_FUNCTION_fname(stname, fname)                \
  DECLARE_ASN1_PRINT_FUNCTION_fname_attr(extern, stname, fname)

# define D2I_OF(type) type *(*)(type **,const unsigned char **,long)
# define I2D_OF(type) int (*)(const type *,unsigned char **)

# define CHECKED_D2I_OF(type, d2i) \
  ((d2i_of_void*) (1 ? d2i : ((D2I_OF(type))0)))
# define CHECKED_I2D_OF(type, i2d) \
  ((i2d_of_void*) (1 ? i2d : ((I2D_OF(type))0)))
# define CHECKED_NEW_OF(type, xnew) \
  ((void *(*)(void)) (1 ? xnew : ((type *(*)(void))0)))
# define CHECKED_PTR_OF(type, p) \
  ((void*) (1 ? p : (type*)0))
# define CHECKED_PPTR_OF(type, p) \
  ((void**) (1 ? p : (type**)0))

# define TYPEDEF_D2I_OF(type) typedef type *d2i_of_##type(type **,const unsigned char **,long)
# define TYPEDEF_I2D_OF(type) typedef int i2d_of_##type(const type *,unsigned char **)
# define TYPEDEF_D2I2D_OF(type) TYPEDEF_D2I_OF(type); TYPEDEF_I2D_OF(type)

typedef
 void *d2i_of_void(void **, const unsigned char **, long);
typedef int i2d_of_void(const void *, unsigned char **);

/*-
* The following macros and typedefs allow an ASN1_ITEM
* to be embedded in a structure and referenced. Since
* the ASN1_ITEM pointers need to be globally accessible
* (possibly from shared libraries) they may exist in
* different forms. On platforms that support it the
* ASN1_ITEM structure itself will be globally exported.
* Other platforms will export a function that returns
* an ASN1_ITEM pointer.
*
* To handle both cases transparently the macros below
* should be used instead of hard coding an ASN1_ITEM
* pointer in a structure.
```

```
*
* The structure will look like this:
*
* typedef struct SOMETHING_st {
*      ...
*      ASN1_ITEM_EXP *iptr;
*      ...
* } SOMETHING;
*
* It would be initialised as e.g.:
*
* SOMETHING somevar = {...,ASN1_ITEM_ref(X509),...};
*
* and the actual pointer extracted with:
*
* const ASN1_ITEM *it = ASN1_ITEM_ptr(somevar.iptr);
 *
* Finally an ASN1_ITEM pointer can be extracted from an
* appropriate reference with: ASN1_ITEM_rptr(X509). This
* would be used when a function takes an ASN1_ITEM * argument.
*
*/


/*
* Platforms that can't easily handle shared global variables are declared as
* functions returning ASN1_ITEM pointers.
*/

/* ASN1_ITEM pointer exported type */
typedef const ASN1_ITEM *ASN1_ITEM_EXP (void);

/* Macro to obtain ASN1_ITEM pointer from exported type */
# define ASN1_ITEM_ptr(iptr) (iptr())

/* Macro to include ASN1_ITEM pointer from base type */
# define ASN1_ITEM_ref(iptr) (iptr##_it)

# define ASN1_ITEM_rptr(ref) (ref##_it())

# define DECLARE_ASN1_ITEM_attr(attr, name)                              \
   attr const ASN1_ITEM * name##_it(void);
# define DECLARE_ASN1_ITEM(name)                                         \
   DECLARE_ASN1_ITEM_attr(extern, name)

/* Parameters used by ASN1_STRING_print_ex() */

/*
```

```
* These determine which characters to escape:
 RFC2253 special characters,
* control characters and MSB set characters
*/

# define ASN1_STRFLGS_ESC_2253          1
# define ASN1_STRFLGS_ESC_CTRL          2
# define ASN1_STRFLGS_ESC_MSB           4

/* Lower 8 bits are reserved as an output type specifier */
# define ASN1_DTFLGS_TYPE_MASK    0x0FUL
# define ASN1_DTFLGS_RFC822       0x00UL
# define ASN1_DTFLGS_ISO8601      0x01UL

/*
* This flag determines how we do escaping: normally RC2253 backslash only,
* set this to use backslash and quote.
*/

# define ASN1_STRFLGS_ESC_QUOTE         8

/* These three flags are internal use only. */

/* Character is a valid PrintableString character */
# define CHARTYPE_PRINTABLESTRING       0x10
/* Character needs escaping if it is the first character */
# define CHARTYPE_FIRST_ESC_2253        0x20
/* Character needs escaping if it is the last character */
# define CHARTYPE_LAST_ESC_2253         0x40

/*
* NB the internal flags are safely reused below by flags handled at the top
 * level.
*/

/*
* If this is set we convert all character strings to UTF8 first
*/

# define ASN1_STRFLGS_UTF8_CONVERT      0x10

/*
* If this is set we don't attempt to interpret content: just assume all
* strings are 1 byte per character. This will produce some pretty odd
* looking output!
*/

# define ASN1_STRFLGS_IGNORE_TYPE       0x20
```

```
/* If this is set we include the string type in the output */
# define ASN1_STRFLGS_SHOW_TYPE         0x40

/*
* This determines which strings to display and which to 'dump' (hex dump of
* content octets or DER encoding). We can only dump non character strings or
* everything. If we don't dump 'unknown' they are interpreted as character
* strings with 1 octet per character and are subject to the usual escaping
* options.
*/

# define ASN1_STRFLGS_DUMP_ALL          0x80
# define ASN1_STRFLGS_DUMP_UNKNOWN      0x100

/*
* These determine what 'dumping' does, we can dump the content octets or the
* DER encoding: both use the RFC2253
 #XXXXX notation.
*/

# define ASN1_STRFLGS_DUMP_DER          0x200

/*
* This flag specifies that RC2254 escaping shall be performed.
*/
#define ASN1_STRFLGS_ESC_2254          0x400

/*
* All the string flags consistent with RFC2253, escaping control characters
* isn't essential in RFC2253 but it is advisable anyway.
*/

# define ASN1_STRFLGS_RFC2253    (ASN1_STRFLGS_ESC_2253 | \
                        ASN1_STRFLGS_ESC_CTRL | \
                        ASN1_STRFLGS_ESC_MSB | \
                        ASN1_STRFLGS_UTF8_CONVERT | \
                        ASN1_STRFLGS_DUMP_UNKNOWN | \
                        ASN1_STRFLGS_DUMP_DER)


struct asn1_type_st {
  int type;
  union {
     char *ptr;
     ASN1_BOOLEAN boolean;
     ASN1_STRING *asn1_string;
     ASN1_OBJECT *object;
```

```
      ASN1_INTEGER *integer;
      ASN1_ENUMERATED *enumerated;
      ASN1_BIT_STRING *bit_string;
      ASN1_OCTET_STRING *octet_string;

     ASN1_PRINTABLESTRING *printablestring;
      ASN1_T61STRING *t61string;
      ASN1_IA5STRING *ia5string;
      ASN1_GENERALSTRING *generalstring;
      ASN1_BMPSTRING *bmpstring;
      ASN1_UNIVERSALSTRING *universalstring;
      ASN1_UTCTIME *utctime;
      ASN1_GENERALIZEDTIME *generalizedtime;
      ASN1_VISIBLESTRING *visiblestring;
      ASN1_UTF8STRING *utf8string;
      /*
       * set and sequence are left complete and still contain the set or
       * sequence bytes
       */
      ASN1_STRING *set;
      ASN1_STRING *sequence;
      ASN1_VALUE *asn1_value;
  } value;
};

SKM_DEFINE_STACK_OF_INTERNAL(ASN1_TYPE, ASN1_TYPE, ASN1_TYPE)
#define sk_ASN1_TYPE_num(sk) OPENSSL_sk_num(ossl_check_const_ASN1_TYPE_sk_type(sk))
#define sk_ASN1_TYPE_value(sk, idx) ((ASN1_TYPE
*)OPENSSL_sk_value(ossl_check_const_ASN1_TYPE_sk_type(sk), (idx)))
#define sk_ASN1_TYPE_new(cmp) ((STACK_OF(ASN1_TYPE)
*)OPENSSL_sk_new(ossl_check_ASN1_TYPE_compfunc_type(cmp)))
#define
 sk_ASN1_TYPE_new_null() ((STACK_OF(ASN1_TYPE) *)OPENSSL_sk_new_null())
#define sk_ASN1_TYPE_new_reserve(cmp, n) ((STACK_OF(ASN1_TYPE)
*)OPENSSL_sk_new_reserve(ossl_check_ASN1_TYPE_compfunc_type(cmp), (n)))
#define sk_ASN1_TYPE_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ASN1_TYPE_sk_type(sk), (n))
#define sk_ASN1_TYPE_free(sk) OPENSSL_sk_free(ossl_check_ASN1_TYPE_sk_type(sk))
#define sk_ASN1_TYPE_zero(sk) OPENSSL_sk_zero(ossl_check_ASN1_TYPE_sk_type(sk))
#define sk_ASN1_TYPE_delete(sk, i) ((ASN1_TYPE
*)OPENSSL_sk_delete(ossl_check_ASN1_TYPE_sk_type(sk), (i)))
#define sk_ASN1_TYPE_delete_ptr(sk, ptr) ((ASN1_TYPE
*)OPENSSL_sk_delete_ptr(ossl_check_ASN1_TYPE_sk_type(sk), ossl_check_ASN1_TYPE_type(ptr)))
#define sk_ASN1_TYPE_push(sk, ptr) OPENSSL_sk_push(ossl_check_ASN1_TYPE_sk_type(sk),
ossl_check_ASN1_TYPE_type(ptr))
#define sk_ASN1_TYPE_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_ASN1_TYPE_sk_type(sk),
ossl_check_ASN1_TYPE_type(ptr))
#define sk_ASN1_TYPE_pop(sk) ((ASN1_TYPE *)OPENSSL_sk_pop(ossl_check_ASN1_TYPE_sk_type(sk)))
#define
```

```
 sk_ASN1_TYPE_shift(sk) ((ASN1_TYPE *)OPENSSL_sk_shift(ossl_check_ASN1_TYPE_sk_type(sk)))
#define sk_ASN1_TYPE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ASN1_TYPE_sk_type(sk),ossl_check_ASN1_TYPE_freefunc_type(freefunc))
#define sk_ASN1_TYPE_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_ASN1_TYPE_sk_type(sk),
ossl_check_ASN1_TYPE_type(ptr), (idx))
#define sk_ASN1_TYPE_set(sk, idx, ptr) ((ASN1_TYPE
*)OPENSSL_sk_set(ossl_check_ASN1_TYPE_sk_type(sk), (idx), ossl_check_ASN1_TYPE_type(ptr)))
#define sk_ASN1_TYPE_find(sk, ptr) OPENSSL_sk_find(ossl_check_ASN1_TYPE_sk_type(sk),
ossl_check_ASN1_TYPE_type(ptr))
#define sk_ASN1_TYPE_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_ASN1_TYPE_sk_type(sk),
ossl_check_ASN1_TYPE_type(ptr))
#define sk_ASN1_TYPE_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_ASN1_TYPE_sk_type(sk),
ossl_check_ASN1_TYPE_type(ptr), pnum)
#define sk_ASN1_TYPE_sort(sk) OPENSSL_sk_sort(ossl_check_ASN1_TYPE_sk_type(sk))
#define
 sk_ASN1_TYPE_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_ASN1_TYPE_sk_type(sk))
#define sk_ASN1_TYPE_dup(sk) ((STACK_OF(ASN1_TYPE)
*)OPENSSL_sk_dup(ossl_check_const_ASN1_TYPE_sk_type(sk)))
#define sk_ASN1_TYPE_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ASN1_TYPE)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASN1_TYPE_sk_type(sk),
ossl_check_ASN1_TYPE_copyfunc_type(copyfunc), ossl_check_ASN1_TYPE_freefunc_type(freefunc)))
#define sk_ASN1_TYPE_set_cmp_func(sk, cmp)
((sk_ASN1_TYPE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASN1_TYPE_sk_type(sk),
ossl_check_ASN1_TYPE_compfunc_type(cmp)))


typedef STACK_OF(ASN1_TYPE) ASN1_SEQUENCE_ANY;

DECLARE_ASN1_ENCODE_FUNCTIONS_name(ASN1_SEQUENCE_ANY, ASN1_SEQUENCE_ANY)
DECLARE_ASN1_ENCODE_FUNCTIONS_name(ASN1_SEQUENCE_ANY, ASN1_SET_ANY)

/* This is used to contain a list of bit names */
typedef struct BIT_STRING_BITNAME_st {
  int bitnum;
  const char *lname;
  const char *sname;
} BIT_STRING_BITNAME;

# define
 B_ASN1_TIME \
                B_ASN1_UTCTIME | \
                B_ASN1_GENERALIZEDTIME

# define B_ASN1_PRINTABLE \
                B_ASN1_NUMERICSTRING| \
                B_ASN1_PRINTABLESTRING| \
                B_ASN1_T61STRING| \
                B_ASN1_IA5STRING| \
```

```
                B_ASN1_BIT_STRING| \
                B_ASN1_UNIVERSALSTRING|\
                B_ASN1_BMPSTRING|\
                B_ASN1_UTF8STRING|\
                B_ASN1_SEQUENCE|\
                B_ASN1_UNKNOWN

# define B_ASN1_DIRECTORYSTRING \
                B_ASN1_PRINTABLESTRING| \
                B_ASN1_TELETEXSTRING|\
                B_ASN1_BMPSTRING|\
                B_ASN1_UNIVERSALSTRING|\
                B_ASN1_UTF8STRING

# define B_ASN1_DISPLAYTEXT \
                B_ASN1_IA5STRING| \
                B_ASN1_VISIBLESTRING| \
                B_ASN1_BMPSTRING|\
                 B_ASN1_UTF8STRING

DECLARE_ASN1_ALLOC_FUNCTIONS_name(ASN1_TYPE, ASN1_TYPE)
DECLARE_ASN1_ENCODE_FUNCTIONS(ASN1_TYPE, ASN1_ANY, ASN1_TYPE)

int ASN1_TYPE_get(const ASN1_TYPE *a);
void ASN1_TYPE_set(ASN1_TYPE *a, int type, void *value);
int ASN1_TYPE_set1(ASN1_TYPE *a, int type, const void *value);
int ASN1_TYPE_cmp(const ASN1_TYPE *a, const ASN1_TYPE *b);

ASN1_TYPE *ASN1_TYPE_pack_sequence(const ASN1_ITEM *it, void *s, ASN1_TYPE **t);
void *ASN1_TYPE_unpack_sequence(const ASN1_ITEM *it, const ASN1_TYPE *t);

SKM_DEFINE_STACK_OF_INTERNAL(ASN1_OBJECT, ASN1_OBJECT, ASN1_OBJECT)
#define sk_ASN1_OBJECT_num(sk) OPENSSL_sk_num(ossl_check_const_ASN1_OBJECT_sk_type(sk))
#define sk_ASN1_OBJECT_value(sk, idx) ((ASN1_OBJECT
*)OPENSSL_sk_value(ossl_check_const_ASN1_OBJECT_sk_type(sk), (idx)))
#define sk_ASN1_OBJECT_new(cmp) ((STACK_OF(ASN1_OBJECT)
*)OPENSSL_sk_new(ossl_check_ASN1_OBJECT_compfunc_type(cmp)))
#define sk_ASN1_OBJECT_new_null() ((STACK_OF(ASN1_OBJECT)
 *)OPENSSL_sk_new_null())
#define sk_ASN1_OBJECT_new_reserve(cmp, n) ((STACK_OF(ASN1_OBJECT)
*)OPENSSL_sk_new_reserve(ossl_check_ASN1_OBJECT_compfunc_type(cmp), (n)))
#define sk_ASN1_OBJECT_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ASN1_OBJECT_sk_type(sk), (n))
#define sk_ASN1_OBJECT_free(sk) OPENSSL_sk_free(ossl_check_ASN1_OBJECT_sk_type(sk))
#define sk_ASN1_OBJECT_zero(sk) OPENSSL_sk_zero(ossl_check_ASN1_OBJECT_sk_type(sk))
#define sk_ASN1_OBJECT_delete(sk, i) ((ASN1_OBJECT
*)OPENSSL_sk_delete(ossl_check_ASN1_OBJECT_sk_type(sk), (i)))
#define sk_ASN1_OBJECT_delete_ptr(sk, ptr) ((ASN1_OBJECT
*)OPENSSL_sk_delete_ptr(ossl_check_ASN1_OBJECT_sk_type(sk), ossl_check_ASN1_OBJECT_type(ptr)))
```

```
#define sk_ASN1_OBJECT_push(sk, ptr) OPENSSL_sk_push(ossl_check_ASN1_OBJECT_sk_type(sk),
ossl_check_ASN1_OBJECT_type(ptr))
#define sk_ASN1_OBJECT_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_ASN1_OBJECT_sk_type(sk),
ossl_check_ASN1_OBJECT_type(ptr))
#define sk_ASN1_OBJECT_pop(sk) ((ASN1_OBJECT
*)OPENSSL_sk_pop(ossl_check_ASN1_OBJECT_sk_type(sk)))
#define
 sk_ASN1_OBJECT_shift(sk) ((ASN1_OBJECT *)OPENSSL_sk_shift(ossl_check_ASN1_OBJECT_sk_type(sk)))
#define sk_ASN1_OBJECT_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ASN1_OBJECT_sk_type(sk),ossl_check_ASN1_OBJECT_freefunc_type(free
func))
#define sk_ASN1_OBJECT_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_ASN1_OBJECT_sk_type(sk),
ossl_check_ASN1_OBJECT_type(ptr), (idx))
#define sk_ASN1_OBJECT_set(sk, idx, ptr) ((ASN1_OBJECT
*)OPENSSL_sk_set(ossl_check_ASN1_OBJECT_sk_type(sk), (idx), ossl_check_ASN1_OBJECT_type(ptr)))
#define sk_ASN1_OBJECT_find(sk, ptr) OPENSSL_sk_find(ossl_check_ASN1_OBJECT_sk_type(sk),
ossl_check_ASN1_OBJECT_type(ptr))
#define sk_ASN1_OBJECT_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_ASN1_OBJECT_sk_type(sk),
ossl_check_ASN1_OBJECT_type(ptr))
#define sk_ASN1_OBJECT_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ASN1_OBJECT_sk_type(sk), ossl_check_ASN1_OBJECT_type(ptr), pnum)
#define sk_ASN1_OBJECT_sort(sk)
 OPENSSL_sk_sort(ossl_check_ASN1_OBJECT_sk_type(sk))
#define sk_ASN1_OBJECT_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_ASN1_OBJECT_sk_type(sk))
#define sk_ASN1_OBJECT_dup(sk) ((STACK_OF(ASN1_OBJECT)
*)OPENSSL_sk_dup(ossl_check_const_ASN1_OBJECT_sk_type(sk)))
#define sk_ASN1_OBJECT_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ASN1_OBJECT)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASN1_OBJECT_sk_type(sk),
ossl_check_ASN1_OBJECT_copyfunc_type(copyfunc), ossl_check_ASN1_OBJECT_freefunc_type(freefunc)))
#define sk_ASN1_OBJECT_set_cmp_func(sk, cmp)
((sk_ASN1_OBJECT_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASN1_OBJECT_sk_type(sk),
ossl_check_ASN1_OBJECT_compfunc_type(cmp)))


DECLARE_ASN1_FUNCTIONS(ASN1_OBJECT)

ASN1_STRING *ASN1_STRING_new(void);
void ASN1_STRING_free(ASN1_STRING *a);
void ASN1_STRING_clear_free(ASN1_STRING *a);
int ASN1_STRING_copy(ASN1_STRING *dst, const ASN1_STRING *str);
DECLARE_ASN1_DUP_FUNCTION(ASN1_STRING)
ASN1_STRING *ASN1_STRING_type_new(int
 type);
int ASN1_STRING_cmp(const ASN1_STRING *a, const ASN1_STRING *b);
 /*
  * Since this is used to store all sorts of things, via macros, for now,
  * make its data void *
```

```
 */
int ASN1_STRING_set(ASN1_STRING *str, const void *data, int len);
void ASN1_STRING_set0(ASN1_STRING *str, void *data, int len);
int ASN1_STRING_length(const ASN1_STRING *x);
# ifndef OPENSSL_NO_DEPRECATED_3_0
OSSL_DEPRECATEDIN_3_0 void ASN1_STRING_length_set(ASN1_STRING *x, int n);
# endif
int ASN1_STRING_type(const ASN1_STRING *x);
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 unsigned char *ASN1_STRING_data(ASN1_STRING *x);
# endif
const unsigned char *ASN1_STRING_get0_data(const ASN1_STRING *x);

DECLARE_ASN1_FUNCTIONS(ASN1_BIT_STRING)
int ASN1_BIT_STRING_set(ASN1_BIT_STRING *a, unsigned char *d, int length);
int ASN1_BIT_STRING_set_bit(ASN1_BIT_STRING *a, int n, int value);
int ASN1_BIT_STRING_get_bit(const ASN1_BIT_STRING *a, int n);
int ASN1_BIT_STRING_check(const ASN1_BIT_STRING
 *a,
                          const unsigned char *flags, int flags_len);

int ASN1_BIT_STRING_name_print(BIO *out, ASN1_BIT_STRING *bs,
                               BIT_STRING_BITNAME *tbl, int indent);
int ASN1_BIT_STRING_num_asc(const char *name, BIT_STRING_BITNAME *tbl);
int ASN1_BIT_STRING_set_asc(ASN1_BIT_STRING *bs, const char *name, int value,
                            BIT_STRING_BITNAME *tbl);

SKM_DEFINE_STACK_OF_INTERNAL(ASN1_INTEGER, ASN1_INTEGER, ASN1_INTEGER)
#define sk_ASN1_INTEGER_num(sk) OPENSSL_sk_num(ossl_check_const_ASN1_INTEGER_sk_type(sk))
#define sk_ASN1_INTEGER_value(sk, idx) ((ASN1_INTEGER
*)OPENSSL_sk_value(ossl_check_const_ASN1_INTEGER_sk_type(sk), (idx)))
#define sk_ASN1_INTEGER_new(cmp) ((STACK_OF(ASN1_INTEGER)
*)OPENSSL_sk_new(ossl_check_ASN1_INTEGER_compfunc_type(cmp)))
#define sk_ASN1_INTEGER_new_null() ((STACK_OF(ASN1_INTEGER) *)OPENSSL_sk_new_null())
#define sk_ASN1_INTEGER_new_reserve(cmp, n) ((STACK_OF(ASN1_INTEGER)
*)OPENSSL_sk_new_reserve(ossl_check_ASN1_INTEGER_compfunc_type(cmp),
 (n)))
#define sk_ASN1_INTEGER_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ASN1_INTEGER_sk_type(sk),
(n))
#define sk_ASN1_INTEGER_free(sk) OPENSSL_sk_free(ossl_check_ASN1_INTEGER_sk_type(sk))
#define sk_ASN1_INTEGER_zero(sk) OPENSSL_sk_zero(ossl_check_ASN1_INTEGER_sk_type(sk))
#define sk_ASN1_INTEGER_delete(sk, i) ((ASN1_INTEGER
*)OPENSSL_sk_delete(ossl_check_ASN1_INTEGER_sk_type(sk), (i)))
#define sk_ASN1_INTEGER_delete_ptr(sk, ptr) ((ASN1_INTEGER
*)OPENSSL_sk_delete_ptr(ossl_check_ASN1_INTEGER_sk_type(sk), ossl_check_ASN1_INTEGER_type(ptr)))
#define sk_ASN1_INTEGER_push(sk, ptr) OPENSSL_sk_push(ossl_check_ASN1_INTEGER_sk_type(sk),
ossl_check_ASN1_INTEGER_type(ptr))
#define sk_ASN1_INTEGER_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_ASN1_INTEGER_sk_type(sk),
```

```
ossl_check_ASN1_INTEGER_type(ptr))
#define sk_ASN1_INTEGER_pop(sk) ((ASN1_INTEGER
*)OPENSSL_sk_pop(ossl_check_ASN1_INTEGER_sk_type(sk)))
#define sk_ASN1_INTEGER_shift(sk) ((ASN1_INTEGER
 *)OPENSSL_sk_shift(ossl_check_ASN1_INTEGER_sk_type(sk)))
#define sk_ASN1_INTEGER_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ASN1_INTEGER_sk_type(sk),ossl_check_ASN1_INTEGER_freefunc_type(f
reefunc))
#define sk_ASN1_INTEGER_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_ASN1_INTEGER_sk_type(sk),
ossl_check_ASN1_INTEGER_type(ptr), (idx))
#define sk_ASN1_INTEGER_set(sk, idx, ptr) ((ASN1_INTEGER
*)OPENSSL_sk_set(ossl_check_ASN1_INTEGER_sk_type(sk), (idx), ossl_check_ASN1_INTEGER_type(ptr)))
#define sk_ASN1_INTEGER_find(sk, ptr) OPENSSL_sk_find(ossl_check_ASN1_INTEGER_sk_type(sk),
ossl_check_ASN1_INTEGER_type(ptr))
#define sk_ASN1_INTEGER_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_ASN1_INTEGER_sk_type(sk),
ossl_check_ASN1_INTEGER_type(ptr))
#define sk_ASN1_INTEGER_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ASN1_INTEGER_sk_type(sk), ossl_check_ASN1_INTEGER_type(ptr), pnum)
#define sk_ASN1_INTEGER_sort(sk) OPENSSL_sk_sort(ossl_check_ASN1_INTEGER_sk_type(sk))
#define
 sk_ASN1_INTEGER_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_ASN1_INTEGER_sk_type(sk))
#define sk_ASN1_INTEGER_dup(sk) ((STACK_OF(ASN1_INTEGER)
*)OPENSSL_sk_dup(ossl_check_const_ASN1_INTEGER_sk_type(sk)))
#define sk_ASN1_INTEGER_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ASN1_INTEGER)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASN1_INTEGER_sk_type(sk),
ossl_check_ASN1_INTEGER_copyfunc_type(copyfunc), ossl_check_ASN1_INTEGER_freefunc_type(freefunc)))
#define sk_ASN1_INTEGER_set_cmp_func(sk, cmp)
((sk_ASN1_INTEGER_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASN1_INTEGER_sk_type(sk),
ossl_check_ASN1_INTEGER_compfunc_type(cmp)))



DECLARE_ASN1_FUNCTIONS(ASN1_INTEGER)
ASN1_INTEGER *d2i_ASN1_UINTEGER(ASN1_INTEGER **a, const unsigned char **pp,
                                long length);
DECLARE_ASN1_DUP_FUNCTION(ASN1_INTEGER)
int ASN1_INTEGER_cmp(const ASN1_INTEGER *x, const ASN1_INTEGER *y);

DECLARE_ASN1_FUNCTIONS(ASN1_ENUMERATED)

int ASN1_UTCTIME_check(const ASN1_UTCTIME *a);
ASN1_UTCTIME
 *ASN1_UTCTIME_set(ASN1_UTCTIME *s, time_t t);
ASN1_UTCTIME *ASN1_UTCTIME_adj(ASN1_UTCTIME *s, time_t t,
                               int offset_day, long offset_sec);
int ASN1_UTCTIME_set_string(ASN1_UTCTIME *s, const char *str);
int ASN1_UTCTIME_cmp_time_t(const ASN1_UTCTIME *s, time_t t);
```

```
int ASN1_GENERALIZEDTIME_check(const ASN1_GENERALIZEDTIME *a);
ASN1_GENERALIZEDTIME *ASN1_GENERALIZEDTIME_set(ASN1_GENERALIZEDTIME *s,
                                time_t t);
ASN1_GENERALIZEDTIME *ASN1_GENERALIZEDTIME_adj(ASN1_GENERALIZEDTIME *s,
                                time_t t, int offset_day,
                                long offset_sec);
int ASN1_GENERALIZEDTIME_set_string(ASN1_GENERALIZEDTIME *s, const char *str);

int ASN1_TIME_diff(int *pday, int *psec,
            const ASN1_TIME *from, const ASN1_TIME *to);

DECLARE_ASN1_FUNCTIONS(ASN1_OCTET_STRING)
DECLARE_ASN1_DUP_FUNCTION(ASN1_OCTET_STRING)
int ASN1_OCTET_STRING_cmp(const
 ASN1_OCTET_STRING *a,
                const ASN1_OCTET_STRING *b);
int ASN1_OCTET_STRING_set(ASN1_OCTET_STRING *str, const unsigned char *data,
                int len);

SKM_DEFINE_STACK_OF_INTERNAL(ASN1_UTF8STRING, ASN1_UTF8STRING, ASN1_UTF8STRING)
#define sk_ASN1_UTF8STRING_num(sk)
OPENSSL_sk_num(ossl_check_const_ASN1_UTF8STRING_sk_type(sk))
#define sk_ASN1_UTF8STRING_value(sk, idx) ((ASN1_UTF8STRING
*)OPENSSL_sk_value(ossl_check_const_ASN1_UTF8STRING_sk_type(sk), (idx)))
#define sk_ASN1_UTF8STRING_new(cmp) ((STACK_OF(ASN1_UTF8STRING)
*)OPENSSL_sk_new(ossl_check_ASN1_UTF8STRING_compfunc_type(cmp)))
#define sk_ASN1_UTF8STRING_new_null() ((STACK_OF(ASN1_UTF8STRING) *)OPENSSL_sk_new_null())
#define sk_ASN1_UTF8STRING_new_reserve(cmp, n) ((STACK_OF(ASN1_UTF8STRING)
*)OPENSSL_sk_new_reserve(ossl_check_ASN1_UTF8STRING_compfunc_type(cmp), (n)))
#define sk_ASN1_UTF8STRING_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_ASN1_UTF8STRING_sk_type(sk), (n))
#define
 sk_ASN1_UTF8STRING_free(sk) OPENSSL_sk_free(ossl_check_ASN1_UTF8STRING_sk_type(sk))
#define sk_ASN1_UTF8STRING_zero(sk) OPENSSL_sk_zero(ossl_check_ASN1_UTF8STRING_sk_type(sk))
#define sk_ASN1_UTF8STRING_delete(sk, i) ((ASN1_UTF8STRING
*)OPENSSL_sk_delete(ossl_check_ASN1_UTF8STRING_sk_type(sk), (i)))
#define sk_ASN1_UTF8STRING_delete_ptr(sk, ptr) ((ASN1_UTF8STRING
*)OPENSSL_sk_delete_ptr(ossl_check_ASN1_UTF8STRING_sk_type(sk),
ossl_check_ASN1_UTF8STRING_type(ptr)))
#define sk_ASN1_UTF8STRING_push(sk, ptr)
OPENSSL_sk_push(ossl_check_ASN1_UTF8STRING_sk_type(sk), ossl_check_ASN1_UTF8STRING_type(ptr))
#define sk_ASN1_UTF8STRING_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_ASN1_UTF8STRING_sk_type(sk),
ossl_check_ASN1_UTF8STRING_type(ptr))
#define sk_ASN1_UTF8STRING_pop(sk) ((ASN1_UTF8STRING
*)OPENSSL_sk_pop(ossl_check_ASN1_UTF8STRING_sk_type(sk)))
#define sk_ASN1_UTF8STRING_shift(sk) ((ASN1_UTF8STRING
*)OPENSSL_sk_shift(ossl_check_ASN1_UTF8STRING_sk_type(sk)))
```

```
#define sk_ASN1_UTF8STRING_pop_free(sk,
 freefunc)
OPENSSL_sk_pop_free(ossl_check_ASN1_UTF8STRING_sk_type(sk),ossl_check_ASN1_UTF8STRING_freefun
c_type(freefunc))
#define sk_ASN1_UTF8STRING_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_ASN1_UTF8STRING_sk_type(sk), ossl_check_ASN1_UTF8STRING_type(ptr),
(idx))
#define sk_ASN1_UTF8STRING_set(sk, idx, ptr) ((ASN1_UTF8STRING
*)OPENSSL_sk_set(ossl_check_ASN1_UTF8STRING_sk_type(sk), (idx),
ossl_check_ASN1_UTF8STRING_type(ptr)))
#define sk_ASN1_UTF8STRING_find(sk, ptr) OPENSSL_sk_find(ossl_check_ASN1_UTF8STRING_sk_type(sk),
ossl_check_ASN1_UTF8STRING_type(ptr))
#define sk_ASN1_UTF8STRING_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_ASN1_UTF8STRING_sk_type(sk),
ossl_check_ASN1_UTF8STRING_type(ptr))
#define sk_ASN1_UTF8STRING_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ASN1_UTF8STRING_sk_type(sk),
ossl_check_ASN1_UTF8STRING_type(ptr), pnum)
#define sk_ASN1_UTF8STRING_sort(sk) OPENSSL_sk_sort(ossl_check_ASN1_UTF8STRING_sk_type(sk))
#define sk_ASN1_UTF8STRING_is_sorted(sk)
 OPENSSL_sk_is_sorted(ossl_check_const_ASN1_UTF8STRING_sk_type(sk))
#define sk_ASN1_UTF8STRING_dup(sk) ((STACK_OF(ASN1_UTF8STRING)
*)OPENSSL_sk_dup(ossl_check_const_ASN1_UTF8STRING_sk_type(sk)))
#define sk_ASN1_UTF8STRING_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ASN1_UTF8STRING)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASN1_UTF8STRING_sk_type(sk),
ossl_check_ASN1_UTF8STRING_copyfunc_type(copyfunc),
ossl_check_ASN1_UTF8STRING_freefunc_type(freefunc)))
#define sk_ASN1_UTF8STRING_set_cmp_func(sk, cmp)
((sk_ASN1_UTF8STRING_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASN1_UTF8STRING_sk_type(sk
), ossl_check_ASN1_UTF8STRING_compfunc_type(cmp)))


DECLARE_ASN1_FUNCTIONS(ASN1_VISIBLESTRING)
DECLARE_ASN1_FUNCTIONS(ASN1_UNIVERSALSTRING)
DECLARE_ASN1_FUNCTIONS(ASN1_UTF8STRING)
DECLARE_ASN1_FUNCTIONS(ASN1_NULL)
DECLARE_ASN1_FUNCTIONS(ASN1_BMPSTRING)

int UTF8_getc(const unsigned char *str, int len, unsigned long *val);
int UTF8_putc(unsigned char *str, int len, unsigned long value);

SKM_DEFINE_STACK_OF_INTERNAL(ASN1_GENERALSTRING,
 ASN1_GENERALSTRING, ASN1_GENERALSTRING)
#define sk_ASN1_GENERALSTRING_num(sk)
OPENSSL_sk_num(ossl_check_const_ASN1_GENERALSTRING_sk_type(sk))
#define sk_ASN1_GENERALSTRING_value(sk, idx) ((ASN1_GENERALSTRING
*)OPENSSL_sk_value(ossl_check_const_ASN1_GENERALSTRING_sk_type(sk), (idx)))
#define sk_ASN1_GENERALSTRING_new(cmp) ((STACK_OF(ASN1_GENERALSTRING)
```

*)OPENSSL_sk_new(ossl_check_ASN1_GENERALSTRING_compfunc_type(cmp)))
#define sk_ASN1_GENERALSTRING_new_null() ((STACK_OF(ASN1_GENERALSTRING)
*)OPENSSL_sk_new_null())
#define sk_ASN1_GENERALSTRING_new_reserve(cmp, n) ((STACK_OF(ASN1_GENERALSTRING)
*)OPENSSL_sk_new_reserve(ossl_check_ASN1_GENERALSTRING_compfunc_type(cmp), (n)))
#define sk_ASN1_GENERALSTRING_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_ASN1_GENERALSTRING_sk_type(sk), (n))
#define sk_ASN1_GENERALSTRING_free(sk)
OPENSSL_sk_free(ossl_check_ASN1_GENERALSTRING_sk_type(sk))
#define sk_ASN1_GENERALSTRING_zero(sk)
OPENSSL_sk_zero(ossl_check_ASN1_GENERALSTRING_sk_type(sk))
#define
sk_ASN1_GENERALSTRING_delete(sk, i) ((ASN1_GENERALSTRING
*)OPENSSL_sk_delete(ossl_check_ASN1_GENERALSTRING_sk_type(sk), (i)))
#define sk_ASN1_GENERALSTRING_delete_ptr(sk, ptr) ((ASN1_GENERALSTRING
*)OPENSSL_sk_delete_ptr(ossl_check_ASN1_GENERALSTRING_sk_type(sk),
ossl_check_ASN1_GENERALSTRING_type(ptr)))
#define sk_ASN1_GENERALSTRING_push(sk, ptr)
OPENSSL_sk_push(ossl_check_ASN1_GENERALSTRING_sk_type(sk),
ossl_check_ASN1_GENERALSTRING_type(ptr))
#define sk_ASN1_GENERALSTRING_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_ASN1_GENERALSTRING_sk_type(sk),
ossl_check_ASN1_GENERALSTRING_type(ptr))
#define sk_ASN1_GENERALSTRING_pop(sk) ((ASN1_GENERALSTRING
*)OPENSSL_sk_pop(ossl_check_ASN1_GENERALSTRING_sk_type(sk)))
#define sk_ASN1_GENERALSTRING_shift(sk) ((ASN1_GENERALSTRING
*)OPENSSL_sk_shift(ossl_check_ASN1_GENERALSTRING_sk_type(sk)))
#define sk_ASN1_GENERALSTRING_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ASN1_GENERALSTRING_sk_type(sk),ossl_check_ASN1_GENERALSTRI
NG_freefunc_type(freefunc))
#define
sk_ASN1_GENERALSTRING_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_ASN1_GENERALSTRING_sk_type(sk),
ossl_check_ASN1_GENERALSTRING_type(ptr), (idx))
#define sk_ASN1_GENERALSTRING_set(sk, idx, ptr) ((ASN1_GENERALSTRING
*)OPENSSL_sk_set(ossl_check_ASN1_GENERALSTRING_sk_type(sk), (idx),
ossl_check_ASN1_GENERALSTRING_type(ptr)))
#define sk_ASN1_GENERALSTRING_find(sk, ptr)
OPENSSL_sk_find(ossl_check_ASN1_GENERALSTRING_sk_type(sk),
ossl_check_ASN1_GENERALSTRING_type(ptr))
#define sk_ASN1_GENERALSTRING_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_ASN1_GENERALSTRING_sk_type(sk),
ossl_check_ASN1_GENERALSTRING_type(ptr))
#define sk_ASN1_GENERALSTRING_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ASN1_GENERALSTRING_sk_type(sk),
ossl_check_ASN1_GENERALSTRING_type(ptr), pnum)
#define sk_ASN1_GENERALSTRING_sort(sk)
OPENSSL_sk_sort(ossl_check_ASN1_GENERALSTRING_sk_type(sk))

```
#define sk_ASN1_GENERALSTRING_is_sorted(sk)
 OPENSSL_sk_is_sorted(ossl_check_const_ASN1_GENERALSTRING_sk_type(sk))
#define sk_ASN1_GENERALSTRING_dup(sk) ((STACK_OF(ASN1_GENERALSTRING)
*)OPENSSL_sk_dup(ossl_check_const_ASN1_GENERALSTRING_sk_type(sk)))
#define sk_ASN1_GENERALSTRING_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(ASN1_GENERALSTRING)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASN1_GENERALSTRING_sk_type(sk),
ossl_check_ASN1_GENERALSTRING_copyfunc_type(copyfunc),
ossl_check_ASN1_GENERALSTRING_freefunc_type(freefunc)))
#define sk_ASN1_GENERALSTRING_set_cmp_func(sk, cmp)
((sk_ASN1_GENERALSTRING_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASN1_GENERALSTRING
_sk_type(sk), ossl_check_ASN1_GENERALSTRING_compfunc_type(cmp)))


DECLARE_ASN1_FUNCTIONS_name(ASN1_STRING, ASN1_PRINTABLE)

DECLARE_ASN1_FUNCTIONS_name(ASN1_STRING, DIRECTORYSTRING)
DECLARE_ASN1_FUNCTIONS_name(ASN1_STRING, DISPLAYTEXT)
DECLARE_ASN1_FUNCTIONS(ASN1_PRINTABLESTRING)
DECLARE_ASN1_FUNCTIONS(ASN1_T61STRING)
DECLARE_ASN1_FUNCTIONS(ASN1_IA5STRING)
DECLARE_ASN1_FUNCTIONS(ASN1_GENERALSTRING)
DECLARE_ASN1_FUNCTIONS(ASN1_UTCTIME)
DECLARE_ASN1_FUNCTIONS(ASN1_GENERALIZEDTIME)
DECLARE_ASN1_FUNCTIONS(ASN1_TIME)

DECLARE_ASN1_DUP_FUNCTION(ASN1_TIME)
DECLARE_ASN1_DUP_FUNCTION(ASN1_UTCTIME)
DECLARE_ASN1_DUP_FUNCTION(ASN1_GENERALIZEDTIME)

DECLARE_ASN1_ITEM(ASN1_OCTET_STRING_NDEF)

ASN1_TIME
 *ASN1_TIME_set(ASN1_TIME *s, time_t t);
ASN1_TIME *ASN1_TIME_adj(ASN1_TIME *s, time_t t,
                         int offset_day, long offset_sec);
int ASN1_TIME_check(const ASN1_TIME *t);
ASN1_GENERALIZEDTIME *ASN1_TIME_to_generalizedtime(const ASN1_TIME *t,
                                       ASN1_GENERALIZEDTIME **out);
int ASN1_TIME_set_string(ASN1_TIME *s, const char *str);
int ASN1_TIME_set_string_X509(ASN1_TIME *s, const char *str);
int ASN1_TIME_to_tm(const ASN1_TIME *s, struct tm *tm);
int ASN1_TIME_normalize(ASN1_TIME *s);
int ASN1_TIME_cmp_time_t(const ASN1_TIME *s, time_t t);
int ASN1_TIME_compare(const ASN1_TIME *a, const ASN1_TIME *b);

int
```

```
 i2a_ASN1_INTEGER(BIO *bp, const ASN1_INTEGER *a);
int a2i_ASN1_INTEGER(BIO *bp, ASN1_INTEGER *bs, char *buf, int size);
int i2a_ASN1_ENUMERATED(BIO *bp, const ASN1_ENUMERATED *a);
int a2i_ASN1_ENUMERATED(BIO *bp, ASN1_ENUMERATED *bs, char *buf, int size);
int i2a_ASN1_OBJECT(BIO *bp, const ASN1_OBJECT *a);
int a2i_ASN1_STRING(BIO *bp, ASN1_STRING *bs, char *buf, int size);
int i2a_ASN1_STRING(BIO *bp, const ASN1_STRING *a, int type);
int i2t_ASN1_OBJECT(char *buf, int buf_len, const ASN1_OBJECT *a);

int a2d_ASN1_OBJECT(unsigned char *out, int olen, const char *buf, int num);
ASN1_OBJECT *ASN1_OBJECT_create(int nid, unsigned char *data, int len,
                        const char *sn, const char *ln);

int ASN1_INTEGER_get_int64(int64_t *pr, const ASN1_INTEGER *a);
int ASN1_INTEGER_set_int64(ASN1_INTEGER *a, int64_t r);
int ASN1_INTEGER_get_uint64(uint64_t *pr, const ASN1_INTEGER *a);
int ASN1_INTEGER_set_uint64(ASN1_INTEGER *a, uint64_t r);

int ASN1_INTEGER_set(ASN1_INTEGER
 *a, long v);
long ASN1_INTEGER_get(const ASN1_INTEGER *a);
ASN1_INTEGER *BN_to_ASN1_INTEGER(const BIGNUM *bn, ASN1_INTEGER *ai);
BIGNUM *ASN1_INTEGER_to_BN(const ASN1_INTEGER *ai, BIGNUM *bn);

int ASN1_ENUMERATED_get_int64(int64_t *pr, const ASN1_ENUMERATED *a);
int ASN1_ENUMERATED_set_int64(ASN1_ENUMERATED *a, int64_t r);


int ASN1_ENUMERATED_set(ASN1_ENUMERATED *a, long v);
long ASN1_ENUMERATED_get(const ASN1_ENUMERATED *a);
ASN1_ENUMERATED *BN_to_ASN1_ENUMERATED(const BIGNUM *bn, ASN1_ENUMERATED *ai);
BIGNUM *ASN1_ENUMERATED_to_BN(const ASN1_ENUMERATED *ai, BIGNUM *bn);

/* General */
/* given a string, return the correct type, max is the maximum length */
int ASN1_PRINTABLE_type(const unsigned char *s, int max);

unsigned long ASN1_tag2bit(int tag);

/* SPECIALS */
int ASN1_get_object(const unsigned char **pp, long *plength, int *ptag,
                int *pclass, long omax);
int ASN1_check_infinite_end(unsigned char **p, long len);
int ASN1_const_check_infinite_end(const unsigned
 char **p, long len);
void ASN1_put_object(unsigned char **pp, int constructed, int length,
                int tag, int xclass);
int ASN1_put_eoc(unsigned char **pp);
```

```
int ASN1_object_size(int constructed, int length, int tag);

/* Used to implement other functions */
void *ASN1_dup(i2d_of_void *i2d, d2i_of_void *d2i, const void *x);

# define ASN1_dup_of(type,i2d,d2i,x) \
  ((type*)ASN1_dup(CHECKED_I2D_OF(type, i2d), \
                   CHECKED_D2I_OF(type, d2i), \
                   CHECKED_PTR_OF(const type, x)))

void *ASN1_item_dup(const ASN1_ITEM *it, const void *x);
int ASN1_item_sign_ex(const ASN1_ITEM *it, X509_ALGOR *algor1,
                      X509_ALGOR *algor2, ASN1_BIT_STRING *signature,
                      const void *data, const ASN1_OCTET_STRING *id,
                      EVP_PKEY *pkey, const EVP_MD *md, OSSL_LIB_CTX *libctx,
                      const char *propq);
int ASN1_item_verify_ex(const ASN1_ITEM *it, const X509_ALGOR *alg,

              const ASN1_BIT_STRING *signature, const void *data,
                      const ASN1_OCTET_STRING *id, EVP_PKEY *pkey,
                      OSSL_LIB_CTX *libctx, const char *propq);

/* ASN1 alloc/free macros for when a type is only used internally */

# define M_ASN1_new_of(type) (type *)ASN1_item_new(ASN1_ITEM_rptr(type))
# define M_ASN1_free_of(x, type) \
                ASN1_item_free(CHECKED_PTR_OF(type, x), ASN1_ITEM_rptr(type))

# ifndef OPENSSL_NO_STDIO
void *ASN1_d2i_fp(void *(*xnew) (void), d2i_of_void *d2i, FILE *in, void **x);

#  define ASN1_d2i_fp_of(type,xnew,d2i,in,x) \
  ((type*)ASN1_d2i_fp(CHECKED_NEW_OF(type, xnew), \
                      CHECKED_D2I_OF(type, d2i), \
                      in, \
                      CHECKED_PPTR_OF(type, x)))

void *ASN1_item_d2i_fp_ex(const ASN1_ITEM *it, FILE *in, void *x,
                          OSSL_LIB_CTX *libctx, const char *propq);
void *ASN1_item_d2i_fp(const ASN1_ITEM *it, FILE *in, void *x);
int
 ASN1_i2d_fp(i2d_of_void *i2d, FILE *out, const void *x);

#  define ASN1_i2d_fp_of(type,i2d,out,x) \
  (ASN1_i2d_fp(CHECKED_I2D_OF(type, i2d), \
               out, \
               CHECKED_PTR_OF(const type, x)))
```

```
int ASN1_item_i2d_fp(const ASN1_ITEM *it, FILE *out, const void *x);
int ASN1_STRING_print_ex_fp(FILE *fp, const ASN1_STRING *str, unsigned long flags);
# endif

int ASN1_STRING_to_UTF8(unsigned char **out, const ASN1_STRING *in);

void *ASN1_d2i_bio(void *(*xnew) (void), d2i_of_void *d2i, BIO *in, void **x);

#  define ASN1_d2i_bio_of(type,xnew,d2i,in,x) \
   ((type*)ASN1_d2i_bio( CHECKED_NEW_OF(type, xnew), \
                         CHECKED_D2I_OF(type, d2i), \
                         in, \
                         CHECKED_PPTR_OF(type, x)))

void *ASN1_item_d2i_bio_ex(const ASN1_ITEM *it, BIO *in, void *pval,
                           OSSL_LIB_CTX *libctx, const char *propq);
void *ASN1_item_d2i_bio(const ASN1_ITEM *it, BIO *in, void *pval);
int ASN1_i2d_bio(i2d_of_void
 *i2d, BIO *out, const void *x);

#  define ASN1_i2d_bio_of(type,i2d,out,x) \
   (ASN1_i2d_bio(CHECKED_I2D_OF(type, i2d), \
                 out, \
                 CHECKED_PTR_OF(const type, x)))

int ASN1_item_i2d_bio(const ASN1_ITEM *it, BIO *out, const void *x);
BIO *ASN1_item_i2d_mem_bio(const ASN1_ITEM *it, const ASN1_VALUE *val);
int ASN1_UTCTIME_print(BIO *fp, const ASN1_UTCTIME *a);
int ASN1_GENERALIZEDTIME_print(BIO *fp, const ASN1_GENERALIZEDTIME *a);
int ASN1_TIME_print(BIO *bp, const ASN1_TIME *tm);
int ASN1_TIME_print_ex(BIO *bp, const ASN1_TIME *tm, unsigned long flags);
int ASN1_STRING_print(BIO *bp, const ASN1_STRING *v);
int ASN1_STRING_print_ex(BIO *out, const ASN1_STRING *str, unsigned long flags);
int ASN1_buf_print(BIO *bp, const unsigned char *buf, size_t buflen, int off);
int ASN1_bn_print(BIO *bp, const char *number, const BIGNUM *num,
                  unsigned char *buf, int off);
int ASN1_parse(BIO *bp, const unsigned char *pp, long len, int indent);
int
 ASN1_parse_dump(BIO *bp, const unsigned char *pp, long len, int indent,
                 int dump);
const char *ASN1_tag2str(int tag);

/* Used to load and write Netscape format cert */

int ASN1_UNIVERSALSTRING_to_string(ASN1_UNIVERSALSTRING *s);

int ASN1_TYPE_set_octetstring(ASN1_TYPE *a, unsigned char *data, int len);
int ASN1_TYPE_get_octetstring(const ASN1_TYPE *a, unsigned char *data, int max_len);
```

```
int ASN1_TYPE_set_int_octetstring(ASN1_TYPE *a, long num,
                          unsigned char *data, int len);
int ASN1_TYPE_get_int_octetstring(const ASN1_TYPE *a, long *num,
                          unsigned char *data, int max_len);

void *ASN1_item_unpack(const ASN1_STRING *oct, const ASN1_ITEM *it);

ASN1_STRING *ASN1_item_pack(void *obj, const ASN1_ITEM *it,
                        ASN1_OCTET_STRING **oct);

void ASN1_STRING_set_default_mask(unsigned long mask);
int ASN1_STRING_set_default_mask_asc(const char *p);
unsigned long ASN1_STRING_get_default_mask(void);
int
 ASN1_mbstring_copy(ASN1_STRING **out, const unsigned char *in, int len,
                    int inform, unsigned long mask);
int ASN1_mbstring_ncopy(ASN1_STRING **out, const unsigned char *in, int len,
                     int inform, unsigned long mask,
                     long minsize, long maxsize);

ASN1_STRING *ASN1_STRING_set_by_NID(ASN1_STRING **out,
                            const unsigned char *in, int inlen,
                            int inform, int nid);
ASN1_STRING_TABLE *ASN1_STRING_TABLE_get(int nid);
int ASN1_STRING_TABLE_add(int, long, long, unsigned long, unsigned long);
void ASN1_STRING_TABLE_cleanup(void);

/* ASN1 template functions */

/* Old API compatible functions */
ASN1_VALUE *ASN1_item_new(const ASN1_ITEM *it);
ASN1_VALUE *ASN1_item_new_ex(const ASN1_ITEM *it, OSSL_LIB_CTX *libctx,
                         const char *propq);
void ASN1_item_free(ASN1_VALUE *val, const ASN1_ITEM *it);
ASN1_VALUE *ASN1_item_d2i_ex(ASN1_VALUE
 **val, const unsigned char **in,
                         long len, const ASN1_ITEM *it,
                         OSSL_LIB_CTX *libctx, const char *propq);
ASN1_VALUE *ASN1_item_d2i(ASN1_VALUE **val, const unsigned char **in,
                      long len, const ASN1_ITEM *it);
int ASN1_item_i2d(const ASN1_VALUE *val, unsigned char **out, const ASN1_ITEM *it);
int ASN1_item_ndef_i2d(const ASN1_VALUE *val, unsigned char **out,
                    const ASN1_ITEM *it);

void ASN1_add_oid_module(void);
void ASN1_add_stable_module(void);

ASN1_TYPE *ASN1_generate_nconf(const char *str, CONF *nconf);
```

```
ASN1_TYPE *ASN1_generate_v3(const char *str, X509V3_CTX *cnf);
int ASN1_str2mask(const char *str, unsigned long *pmask);

/* ASN1 Print flags */

/* Indicate missing OPTIONAL fields */
# define ASN1_PCTX_FLAGS_SHOW_ABSENT            0x001
/* Mark start and end of SEQUENCE */
# define ASN1_PCTX_FLAGS_SHOW_SEQUENCE          0x002
/* Mark start and end
 of SEQUENCE/SET OF */
# define ASN1_PCTX_FLAGS_SHOW_SSOF              0x004
/* Show the ASN1 type of primitives */
# define ASN1_PCTX_FLAGS_SHOW_TYPE              0x008
/* Don't show ASN1 type of ANY */
# define ASN1_PCTX_FLAGS_NO_ANY_TYPE            0x010
/* Don't show ASN1 type of MSTRINGs */
# define ASN1_PCTX_FLAGS_NO_MSTRING_TYPE        0x020
/* Don't show field names in SEQUENCE */
# define ASN1_PCTX_FLAGS_NO_FIELD_NAME          0x040
/* Show structure names of each SEQUENCE field */
# define ASN1_PCTX_FLAGS_SHOW_FIELD_STRUCT_NAME  0x080
/* Don't show structure name even at top level */
# define ASN1_PCTX_FLAGS_NO_STRUCT_NAME         0x100

int ASN1_item_print(BIO *out, const ASN1_VALUE *ifld, int indent,
                    const ASN1_ITEM *it, const ASN1_PCTX *pctx);
ASN1_PCTX *ASN1_PCTX_new(void);
void ASN1_PCTX_free(ASN1_PCTX *p);
unsigned long ASN1_PCTX_get_flags(const ASN1_PCTX *p);
void ASN1_PCTX_set_flags(ASN1_PCTX *p, unsigned long flags);
unsigned long ASN1_PCTX_get_nm_flags(const
 ASN1_PCTX *p);
void ASN1_PCTX_set_nm_flags(ASN1_PCTX *p, unsigned long flags);
unsigned long ASN1_PCTX_get_cert_flags(const ASN1_PCTX *p);
void ASN1_PCTX_set_cert_flags(ASN1_PCTX *p, unsigned long flags);
unsigned long ASN1_PCTX_get_oid_flags(const ASN1_PCTX *p);
void ASN1_PCTX_set_oid_flags(ASN1_PCTX *p, unsigned long flags);
unsigned long ASN1_PCTX_get_str_flags(const ASN1_PCTX *p);
void ASN1_PCTX_set_str_flags(ASN1_PCTX *p, unsigned long flags);

ASN1_SCTX *ASN1_SCTX_new(int (*scan_cb) (ASN1_SCTX *ctx));
void ASN1_SCTX_free(ASN1_SCTX *p);
const ASN1_ITEM *ASN1_SCTX_get_item(ASN1_SCTX *p);
const ASN1_TEMPLATE *ASN1_SCTX_get_template(ASN1_SCTX *p);
unsigned long ASN1_SCTX_get_flags(ASN1_SCTX *p);
void ASN1_SCTX_set_app_data(ASN1_SCTX *p, void *data);
void *ASN1_SCTX_get_app_data(ASN1_SCTX *p);
```

```
const BIO_METHOD *BIO_f_asn1(void);

/* cannot constify val because of CMS_stream() */
BIO *BIO_new_NDEF(BIO *out, ASN1_VALUE *val, const ASN1_ITEM *it);

int i2d_ASN1_bio_stream(BIO
 *out, ASN1_VALUE *val, BIO *in, int flags,
                  const ASN1_ITEM *it);
int PEM_write_bio_ASN1_stream(BIO *out, ASN1_VALUE *val, BIO *in, int flags,
                      const char *hdr, const ASN1_ITEM *it);
/* cannot constify val because of CMS_dataFinal() */
int SMIME_write_ASN1(BIO *bio, ASN1_VALUE *val, BIO *data, int flags,
                int ctype_nid, int econt_nid,
                STACK_OF(X509_ALGOR) *mdalgs, const ASN1_ITEM *it);
int SMIME_write_ASN1_ex(BIO *bio, ASN1_VALUE *val, BIO *data, int flags,
                  int ctype_nid, int econt_nid,
                  STACK_OF(X509_ALGOR) *mdalgs, const ASN1_ITEM *it,
                  OSSL_LIB_CTX *libctx, const char *propq);
ASN1_VALUE *SMIME_read_ASN1(BIO *bio, BIO **bcont, const ASN1_ITEM *it);
ASN1_VALUE *SMIME_read_ASN1_ex(BIO *bio, int flags, BIO **bcont,
                       const ASN1_ITEM *it, ASN1_VALUE **x,
                       OSSL_LIB_CTX
 *libctx, const char *propq);
int SMIME_crlf_copy(BIO *in, BIO *out, int flags);
int SMIME_text(BIO *in, BIO *out);

const ASN1_ITEM *ASN1_ITEM_lookup(const char *name);
const ASN1_ITEM *ASN1_ITEM_get(size_t i);

/* Legacy compatibility */
# define DECLARE_ASN1_FUNCTIONS_fname(type, itname, name) \
       DECLARE_ASN1_ALLOC_FUNCTIONS_name(type, name) \
       DECLARE_ASN1_ENCODE_FUNCTIONS(type, itname, name)
# define DECLARE_ASN1_FUNCTIONS_const(type) DECLARE_ASN1_FUNCTIONS(type)
# define DECLARE_ASN1_ENCODE_FUNCTIONS_const(type, name) \
       DECLARE_ASN1_ENCODE_FUNCTIONS(type, name)
# define I2D_OF_const(type) I2D_OF(type)
# define ASN1_dup_of_const(type,i2d,d2i,x) ASN1_dup_of(type,i2d,d2i,x)
# define ASN1_i2d_fp_of_const(type,i2d,out,x) ASN1_i2d_fp_of(type,i2d,out,x)
# define ASN1_i2d_bio_of_const(type,i2d,out,x) ASN1_i2d_bio_of(type,i2d,out,x)

# ifdef  __cplusplus
}
# endif
#endif
```
Copyright npm, Inc

Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
The MIT License (MIT)

Copyright (c) 2020 Vercel, Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR
IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
/*
* WARNING: do not edit!
* Generated by util/mkbuildinf.pl
*
* Copyright 2014-2025 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#define PLATFORM "platform: BSD-x86_64"
#define DATE "built on: Wed Mar 5 20:59:39 2025 UTC"

/*

```
* Generate compiler_flags as an array of individual characters. This is a
* workaround for the situation where CFLAGS gets too long for a C90 string
* literal
*/
static const char compiler_flags[] = {
  'c','o','m','p','i','l','e','r',':',' ','g','c','c',' ','-','f',
  'P','I','C',' ','-','p','t','h','r','e','a','d',' ','-','W','a',
  ',','-','-','n','o','e','x','e','c','s','t','a','c','k',' ','-',
  'W','a','l','l',' ','-','O','3',' ','-','D','L','_','E','N','D',
  'I','A','N',' ','-','D','O','P','E','N','S','S','L','_','P','I',
   'C',' ','-','D','_','T','H','R','E','A','D','_','S','A','F','E',
  ' ','-','D','_','R','E','E','N','T','R','A','N','T',' ','-','D',
  'O','P','E','N','S','S','L','_','B','U','I','L','D','I','N','G',
  '_','O','P','E','N','S','S','L',' ','-','D','N','D','E','B','U',
  'G','\0'
};
```

Copyright (c) Donald Stufft and individual contributors.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice,
   this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED
 TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER
CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"

means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each

Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");

you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Copyright npm, Inc

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

```
/* WARNING: do not edit! */
/* Generated by Makefile from include/crypto/bn_conf.h.in */
/*
* Copyright 2016-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#ifndef OSSL_CRYPTO_BN_CONF_H
# define OSSL_CRYPTO_BN_CONF_H
# pragma once

/*
* The contents of this file are not used in the UEFI build, as
* both 32-bit and 64-bit builds are supported from a single run
* of the Configure script.
*/

/* Should we define BN_DIV2W here? */

/* Only one for the following should be defined */
#undef SIXTY_FOUR_BIT_LONG
```

```
#undef SIXTY_FOUR_BIT
#define THIRTY_TWO_BIT

#endif
```

ISC License

Copyright 2017-2022 (c) npm, Inc.

Permission to use, copy, modify, and/or distribute this software for
any purpose with or without fee is hereby granted, provided that the
above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE COPYRIGHT HOLDER DISCLAIMS
ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE
COPYRIGHT HOLDER BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR
CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS
OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE
OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE
USE OR PERFORMANCE OF THIS SOFTWARE.

```
/*
* WARNING: do not edit!
* Generated by Makefile from providers/common/include/prov/der_rsa.h.in
*
* Copyright 2020-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#include "crypto/rsa.h"
#include "internal/der.h"

/* Well known OIDs precompiled */

/*
* hashAlgs OBJECT IDENTIFIER ::= { nistAlgorithms 2 }
*/
#define DER_OID_V_hashAlgs DER_P_OBJECT, 8, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04, 0x02
#define DER_OID_SZ_hashAlgs 10
extern const unsigned char ossl_der_oid_hashAlgs[DER_OID_SZ_hashAlgs];

/*
* rsaEncryption    OBJECT IDENTIFIER ::= { pkcs-1 1 }
*/
#define DER_OID_V_rsaEncryption DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01, 0x01, 0x01
```

```
#define DER_OID_SZ_rsaEncryption 11
extern const unsigned
 char ossl_der_oid_rsaEncryption[DER_OID_SZ_rsaEncryption];

/*
* id-RSAES-OAEP    OBJECT IDENTIFIER ::= { pkcs-1 7 }
*/
#define DER_OID_V_id_RSAES_OAEP DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01, 0x01,
0x07
#define DER_OID_SZ_id_RSAES_OAEP 11
extern const unsigned char ossl_der_oid_id_RSAES_OAEP[DER_OID_SZ_id_RSAES_OAEP];

/*
* id-pSpecified    OBJECT IDENTIFIER ::= { pkcs-1 9 }
*/
#define DER_OID_V_id_pSpecified DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01, 0x01, 0x09
#define DER_OID_SZ_id_pSpecified 11
extern const unsigned char ossl_der_oid_id_pSpecified[DER_OID_SZ_id_pSpecified];

/*
* id-RSASSA-PSS    OBJECT IDENTIFIER ::= { pkcs-1 10 }
*/
#define DER_OID_V_id_RSASSA_PSS DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01, 0x01,
0x0A
#define DER_OID_SZ_id_RSASSA_PSS 11
extern const unsigned char ossl_der_oid_id_RSASSA_PSS[DER_OID_SZ_id_RSASSA_PSS];

/*
* md2WithRSAEncryption        OBJECT IDENTIFIER ::= { pkcs-1 2 }
*/
#define DER_OID_V_md2WithRSAEncryption
 DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01, 0x01, 0x02
#define DER_OID_SZ_md2WithRSAEncryption 11
extern const unsigned char ossl_der_oid_md2WithRSAEncryption[DER_OID_SZ_md2WithRSAEncryption];

/*
* md5WithRSAEncryption        OBJECT IDENTIFIER ::= { pkcs-1 4 }
*/
#define DER_OID_V_md5WithRSAEncryption DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01,
0x01, 0x04
#define DER_OID_SZ_md5WithRSAEncryption 11
extern const unsigned char ossl_der_oid_md5WithRSAEncryption[DER_OID_SZ_md5WithRSAEncryption];

/*
* sha1WithRSAEncryption       OBJECT IDENTIFIER ::= { pkcs-1 5 }
*/
#define DER_OID_V_sha1WithRSAEncryption DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01,
0x01, 0x05
```

```
#define DER_OID_SZ_sha1WithRSAEncryption 11
extern const unsigned char ossl_der_oid_sha1WithRSAEncryption[DER_OID_SZ_sha1WithRSAEncryption];

/*
* sha224WithRSAEncryption      OBJECT IDENTIFIER ::= { pkcs-1 14 }
*/
#define DER_OID_V_sha224WithRSAEncryption DER_P_OBJECT,
 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01, 0x01, 0x0E
#define DER_OID_SZ_sha224WithRSAEncryption 11
extern const unsigned char ossl_der_oid_sha224WithRSAEncryption[DER_OID_SZ_sha224WithRSAEncryption];

/*
* sha256WithRSAEncryption      OBJECT IDENTIFIER ::= { pkcs-1 11 }
*/
#define DER_OID_V_sha256WithRSAEncryption DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D,
0x01, 0x01, 0x0B
#define DER_OID_SZ_sha256WithRSAEncryption 11
extern const unsigned char ossl_der_oid_sha256WithRSAEncryption[DER_OID_SZ_sha256WithRSAEncryption];

/*
* sha384WithRSAEncryption      OBJECT IDENTIFIER ::= { pkcs-1 12 }
*/
#define DER_OID_V_sha384WithRSAEncryption DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D,
0x01, 0x01, 0x0C
#define DER_OID_SZ_sha384WithRSAEncryption 11
extern const unsigned char ossl_der_oid_sha384WithRSAEncryption[DER_OID_SZ_sha384WithRSAEncryption];

/*
* sha512WithRSAEncryption      OBJECT IDENTIFIER ::= { pkcs-1 13 }
*/
#define DER_OID_V_sha512WithRSAEncryption
 DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01, 0x01, 0x0D
#define DER_OID_SZ_sha512WithRSAEncryption 11
extern const unsigned char ossl_der_oid_sha512WithRSAEncryption[DER_OID_SZ_sha512WithRSAEncryption];

/*
* sha512-224WithRSAEncryption  OBJECT IDENTIFIER ::= { pkcs-1 15 }
*/
#define DER_OID_V_sha512_224WithRSAEncryption DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D,
0x01, 0x01, 0x0F
#define DER_OID_SZ_sha512_224WithRSAEncryption 11
extern const unsigned char
ossl_der_oid_sha512_224WithRSAEncryption[DER_OID_SZ_sha512_224WithRSAEncryption];

/*
* sha512-256WithRSAEncryption  OBJECT IDENTIFIER ::= { pkcs-1 16 }
*/
#define DER_OID_V_sha512_256WithRSAEncryption DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D,
```

```
0x01, 0x01, 0x10
#define DER_OID_SZ_sha512_256WithRSAEncryption 11
extern const unsigned char
ossl_der_oid_sha512_256WithRSAEncryption[DER_OID_SZ_sha512_256WithRSAEncryption];

/*
* id-mgf1    OBJECT IDENTIFIER ::= { pkcs-1 8 }
*/
#define DER_OID_V_id_mgf1
 DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01, 0x01, 0x08
#define DER_OID_SZ_id_mgf1 11
extern const unsigned char ossl_der_oid_id_mgf1[DER_OID_SZ_id_mgf1];

/*
* id-rsassa-pkcs1-v1_5-with-sha3-224 OBJECT IDENTIFIER ::= { sigAlgs 13 }
*/
#define DER_OID_V_id_rsassa_pkcs1_v1_5_with_sha3_224 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65,
0x03, 0x04, 0x03, 0x0D
#define DER_OID_SZ_id_rsassa_pkcs1_v1_5_with_sha3_224 11
extern const unsigned char
ossl_der_oid_id_rsassa_pkcs1_v1_5_with_sha3_224[DER_OID_SZ_id_rsassa_pkcs1_v1_5_with_sha3_224];

/*
* id-rsassa-pkcs1-v1_5-with-sha3-256 OBJECT IDENTIFIER ::= { sigAlgs 14 }
*/
#define DER_OID_V_id_rsassa_pkcs1_v1_5_with_sha3_256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65,
0x03, 0x04, 0x03, 0x0E
#define DER_OID_SZ_id_rsassa_pkcs1_v1_5_with_sha3_256 11
extern const unsigned char
ossl_der_oid_id_rsassa_pkcs1_v1_5_with_sha3_256[DER_OID_SZ_id_rsassa_pkcs1_v1_5_with_sha3_256];

/*
* id-rsassa-pkcs1-v1_5-with-sha3-384 OBJECT IDENTIFIER
 ::= { sigAlgs 15 }
*/
#define DER_OID_V_id_rsassa_pkcs1_v1_5_with_sha3_384 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65,
0x03, 0x04, 0x03, 0x0F
#define DER_OID_SZ_id_rsassa_pkcs1_v1_5_with_sha3_384 11
extern const unsigned char
ossl_der_oid_id_rsassa_pkcs1_v1_5_with_sha3_384[DER_OID_SZ_id_rsassa_pkcs1_v1_5_with_sha3_384];

/*
* id-rsassa-pkcs1-v1_5-with-sha3-512 OBJECT IDENTIFIER ::= { sigAlgs 16 }
*/
#define DER_OID_V_id_rsassa_pkcs1_v1_5_with_sha3_512 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65,
0x03, 0x04, 0x03, 0x10
#define DER_OID_SZ_id_rsassa_pkcs1_v1_5_with_sha3_512 11
extern const unsigned char
```

```
ossl_der_oid_id_rsassa_pkcs1_v1_5_with_sha3_512[DER_OID_SZ_id_rsassa_pkcs1_v1_5_with_sha3_512];

/*
* md4WithRSAEncryption OBJECT IDENTIFIER ::= { pkcs-1 3 }
*/
#define DER_OID_V_md4WithRSAEncryption DER_P_OBJECT, 9, 0x2A, 0x86, 0x48, 0x86, 0xF7, 0x0D, 0x01,
0x01, 0x03
#define DER_OID_SZ_md4WithRSAEncryption 11
extern const unsigned char ossl_der_oid_md4WithRSAEncryption[DER_OID_SZ_md4WithRSAEncryption];

/*
 * ripemd160WithRSAEncryption    OBJECT IDENTIFIER ::= {
*     iso(1) identified-organization(3) teletrust(36) algorithm(3) signatureAlgorithm(3) rsaSignature(1) 2
* }
*/
#define DER_OID_V_ripemd160WithRSAEncryption DER_P_OBJECT, 6, 0x2B, 0x24, 0x03, 0x03, 0x01, 0x02
#define DER_OID_SZ_ripemd160WithRSAEncryption 8
extern const unsigned char
ossl_der_oid_ripemd160WithRSAEncryption[DER_OID_SZ_ripemd160WithRSAEncryption];

/*
* mdc2WithRSASignature OBJECT IDENTIFIER ::= {
*     iso(1) identified-organization(3) oiw(14) secsig(3) algorithms(2) mdc2WithRSASignature(14)
* }
*/
#define DER_OID_V_mdc2WithRSASignature DER_P_OBJECT, 5, 0x2B, 0x0E, 0x03, 0x02, 0x0E
#define DER_OID_SZ_mdc2WithRSASignature 7
extern const unsigned char ossl_der_oid_mdc2WithRSASignature[DER_OID_SZ_mdc2WithRSASignature];


/* PSS parameters */
int ossl_DER_w_RSASSA_PSS_params(WPACKET *pkt, int tag,
                         const RSA_PSS_PARAMS_30 *pss);
/* Subject Public
 Key Info */
int ossl_DER_w_algorithmIdentifier_RSA(WPACKET *pkt, int tag, RSA *rsa);
int ossl_DER_w_algorithmIdentifier_RSA_PSS(WPACKET *pkt, int tag,
                                   int rsa_type,
                                   const RSA_PSS_PARAMS_30 *pss);
/* Signature */
int ossl_DER_w_algorithmIdentifier_MDWithRSAEncryption(WPACKET *pkt, int tag,
                                       int mdnid);
Copyright 2017 Kat Marchn
Copyright npm, Inc.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
```

the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER
DEALINGS IN THE SOFTWARE.

This library is a fork of 'better-json-errors' by Kat Marchn, extended and
distributed under the terms of the MIT license above.
(The MIT License)

Copyright (c) 2011-2017 JP Richardson

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files
(the 'Software'), to deal in the Software without restriction, including without limitation the rights to use, copy, modify,
merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED 'AS IS', WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS
OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM, OUT OF
OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
{
  global:
    OSSL_provider_init;
  local: *;
};
```

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/x509v3.h.in
*
* Copyright 1999-2023 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_X509V3_H
# define OPENSSL_X509V3_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_X509V3_H
# endif

# include <openssl/bio.h>
# include <openssl/x509.h>
# include <openssl/conf.h>
# include <openssl/x509v3err.h>

#ifdef __cplusplus
extern "C" {
#endif

/* Forward reference */
struct v3_ext_method;
struct v3_ext_ctx;

/* Useful typedefs */

typedef void *(*X509V3_EXT_NEW)(void);
typedef void (*X509V3_EXT_FREE) (void *);
typedef void *(*X509V3_EXT_D2I)(void *, const unsigned char **, long);
typedef int (*X509V3_EXT_I2D)
 (const void *, unsigned char **);
typedef STACK_OF(CONF_VALUE) *
   (*X509V3_EXT_I2V) (const struct v3_ext_method *method, void *ext,
                      STACK_OF(CONF_VALUE) *extlist);
typedef void *(*X509V3_EXT_V2I)(const struct v3_ext_method *method,
                                struct v3_ext_ctx *ctx,
```

```
                        STACK_OF(CONF_VALUE) *values);
typedef char *(*X509V3_EXT_I2S)(const struct v3_ext_method *method,
                        void *ext);
typedef void *(*X509V3_EXT_S2I)(const struct v3_ext_method *method,
                        struct v3_ext_ctx *ctx, const char *str);
typedef int (*X509V3_EXT_I2R) (const struct v3_ext_method *method, void *ext,
                       BIO *out, int indent);
typedef void *(*X509V3_EXT_R2I)(const struct v3_ext_method *method,
                        struct v3_ext_ctx *ctx, const char *str);

/* V3 extension structure */

struct v3_ext_method {
  int ext_nid;
  int ext_flags;
/*
 If this is set the following four fields are ignored */
  ASN1_ITEM_EXP *it;
/* Old style ASN1 calls */
  X509V3_EXT_NEW ext_new;
  X509V3_EXT_FREE ext_free;
  X509V3_EXT_D2I d2i;
  X509V3_EXT_I2D i2d;
/* The following pair is used for string extensions */
  X509V3_EXT_I2S i2s;
  X509V3_EXT_S2I s2i;
/* The following pair is used for multi-valued extensions */
  X509V3_EXT_I2V i2v;
  X509V3_EXT_V2I v2i;
/* The following are used for raw extensions */
  X509V3_EXT_I2R i2r;
  X509V3_EXT_R2I r2i;
  void *usr_data;           /* Any extension specific data */
};

typedef struct X509V3_CONF_METHOD_st {
  char *(*get_string) (void *db, const char *section, const char *value);
  STACK_OF(CONF_VALUE) *(*get_section) (void *db, const char *section);
  void (*free_string) (void *db, char *string);
  void (*free_section) (void *db, STACK_OF(CONF_VALUE) *section);
} X509V3_CONF_METHOD;

/* Context specific info for producing X509 v3 extensions*/
struct v3_ext_ctx
 {
# define X509V3_CTX_TEST 0x1
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define CTX_TEST X509V3_CTX_TEST
```

```
# endif
# define X509V3_CTX_REPLACE 0x2
  int flags;
  X509 *issuer_cert;
  X509 *subject_cert;
  X509_REQ *subject_req;
  X509_CRL *crl;
  X509V3_CONF_METHOD *db_meth;
  void *db;
  EVP_PKEY *issuer_pkey;
/* Maybe more here */
};

typedef struct v3_ext_method X509V3_EXT_METHOD;

SKM_DEFINE_STACK_OF_INTERNAL(X509V3_EXT_METHOD, X509V3_EXT_METHOD,
X509V3_EXT_METHOD)
#define sk_X509V3_EXT_METHOD_num(sk)
OPENSSL_sk_num(ossl_check_const_X509V3_EXT_METHOD_sk_type(sk))
#define sk_X509V3_EXT_METHOD_value(sk, idx) ((X509V3_EXT_METHOD
*)OPENSSL_sk_value(ossl_check_const_X509V3_EXT_METHOD_sk_type(sk), (idx)))
#define sk_X509V3_EXT_METHOD_new(cmp) ((STACK_OF(X509V3_EXT_METHOD)
*)OPENSSL_sk_new(ossl_check_X509V3_EXT_METHOD_compfunc_type(cmp)))
#define sk_X509V3_EXT_METHOD_new_null() ((STACK_OF(X509V3_EXT_METHOD)
*)OPENSSL_sk_new_null())
#define sk_X509V3_EXT_METHOD_new_reserve(cmp,
 n) ((STACK_OF(X509V3_EXT_METHOD)
*)OPENSSL_sk_new_reserve(ossl_check_X509V3_EXT_METHOD_compfunc_type(cmp), (n)))
#define sk_X509V3_EXT_METHOD_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_X509V3_EXT_METHOD_sk_type(sk), (n))
#define sk_X509V3_EXT_METHOD_free(sk)
OPENSSL_sk_free(ossl_check_X509V3_EXT_METHOD_sk_type(sk))
#define sk_X509V3_EXT_METHOD_zero(sk)
OPENSSL_sk_zero(ossl_check_X509V3_EXT_METHOD_sk_type(sk))
#define sk_X509V3_EXT_METHOD_delete(sk, i) ((X509V3_EXT_METHOD
*)OPENSSL_sk_delete(ossl_check_X509V3_EXT_METHOD_sk_type(sk), (i)))
#define sk_X509V3_EXT_METHOD_delete_ptr(sk, ptr) ((X509V3_EXT_METHOD
*)OPENSSL_sk_delete_ptr(ossl_check_X509V3_EXT_METHOD_sk_type(sk),
ossl_check_X509V3_EXT_METHOD_type(ptr)))
#define sk_X509V3_EXT_METHOD_push(sk, ptr)
OPENSSL_sk_push(ossl_check_X509V3_EXT_METHOD_sk_type(sk),
ossl_check_X509V3_EXT_METHOD_type(ptr))
#define sk_X509V3_EXT_METHOD_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_X509V3_EXT_METHOD_sk_type(sk),
ossl_check_X509V3_EXT_METHOD_type(ptr))
#define
 sk_X509V3_EXT_METHOD_pop(sk) ((X509V3_EXT_METHOD
*)OPENSSL_sk_pop(ossl_check_X509V3_EXT_METHOD_sk_type(sk)))
```

```
#define sk_X509V3_EXT_METHOD_shift(sk) ((X509V3_EXT_METHOD
*)OPENSSL_sk_shift(ossl_check_X509V3_EXT_METHOD_sk_type(sk)))
#define sk_X509V3_EXT_METHOD_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509V3_EXT_METHOD_sk_type(sk),ossl_check_X509V3_EXT_METHOD
_freefunc_type(freefunc))
#define sk_X509V3_EXT_METHOD_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_X509V3_EXT_METHOD_sk_type(sk),
ossl_check_X509V3_EXT_METHOD_type(ptr), (idx))
#define sk_X509V3_EXT_METHOD_set(sk, idx, ptr) ((X509V3_EXT_METHOD
*)OPENSSL_sk_set(ossl_check_X509V3_EXT_METHOD_sk_type(sk), (idx),
ossl_check_X509V3_EXT_METHOD_type(ptr)))
#define sk_X509V3_EXT_METHOD_find(sk, ptr)
OPENSSL_sk_find(ossl_check_X509V3_EXT_METHOD_sk_type(sk),
ossl_check_X509V3_EXT_METHOD_type(ptr))
#define sk_X509V3_EXT_METHOD_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_X509V3_EXT_METHOD_sk_type(sk),
 ossl_check_X509V3_EXT_METHOD_type(ptr))
#define sk_X509V3_EXT_METHOD_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509V3_EXT_METHOD_sk_type(sk),
ossl_check_X509V3_EXT_METHOD_type(ptr), pnum)
#define sk_X509V3_EXT_METHOD_sort(sk)
OPENSSL_sk_sort(ossl_check_X509V3_EXT_METHOD_sk_type(sk))
#define sk_X509V3_EXT_METHOD_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509V3_EXT_METHOD_sk_type(sk))
#define sk_X509V3_EXT_METHOD_dup(sk) ((STACK_OF(X509V3_EXT_METHOD)
*)OPENSSL_sk_dup(ossl_check_const_X509V3_EXT_METHOD_sk_type(sk)))
#define sk_X509V3_EXT_METHOD_deep_copy(sk, copyfunc, freefunc)
((STACK_OF(X509V3_EXT_METHOD)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509V3_EXT_METHOD_sk_type(sk),
ossl_check_X509V3_EXT_METHOD_copyfunc_type(copyfunc),
ossl_check_X509V3_EXT_METHOD_freefunc_type(freefunc)))
#define sk_X509V3_EXT_METHOD_set_cmp_func(sk, cmp)
((sk_X509V3_EXT_METHOD_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509V3_EXT_METHOD_sk
_type(sk), ossl_check_X509V3_EXT_METHOD_compfunc_type(cmp)))


/*
 ext_flags values */
# define X509V3_EXT_DYNAMIC      0x1
# define X509V3_EXT_CTX_DEP      0x2
# define X509V3_EXT_MULTILINE    0x4

typedef BIT_STRING_BITNAME ENUMERATED_NAMES;

typedef struct BASIC_CONSTRAINTS_st {
  int ca;
  ASN1_INTEGER *pathlen;
} BASIC_CONSTRAINTS;
```

```
typedef struct PKEY_USAGE_PERIOD_st {
  ASN1_GENERALIZEDTIME *notBefore;
  ASN1_GENERALIZEDTIME *notAfter;
} PKEY_USAGE_PERIOD;

typedef struct otherName_st {
  ASN1_OBJECT *type_id;
  ASN1_TYPE *value;
} OTHERNAME;

typedef struct EDIPartyName_st {
  ASN1_STRING *nameAssigner;
  ASN1_STRING *partyName;
} EDIPARTYNAME;

typedef struct GENERAL_NAME_st {
# define GEN_OTHERNAME   0
# define GEN_EMAIL       1
# define GEN_DNS         2
# define GEN_X400        3
# define GEN_DIRNAME     4
# define GEN_EDIPARTY    5
# define GEN_URI         6
# define GEN_IPADD       7
# define GEN_RID         8
  int type;
  union {
     char *ptr;
     OTHERNAME *otherName;   /* otherName */
      ASN1_IA5STRING *rfc822Name;
     ASN1_IA5STRING *dNSName;
     ASN1_STRING *x400Address;
     X509_NAME *directoryName;
     EDIPARTYNAME *ediPartyName;
     ASN1_IA5STRING *uniformResourceIdentifier;
     ASN1_OCTET_STRING *iPAddress;
     ASN1_OBJECT *registeredID;
     /* Old names */
     ASN1_OCTET_STRING *ip;  /* iPAddress */
     X509_NAME *dirn;        /* dirn */
     ASN1_IA5STRING *ia5;    /* rfc822Name, dNSName,
                              * uniformResourceIdentifier */
     ASN1_OBJECT *rid;       /* registeredID */
     ASN1_TYPE *other;       /* x400Address */
  } d;
} GENERAL_NAME;
```

```
typedef struct ACCESS_DESCRIPTION_st {
  ASN1_OBJECT *method;
  GENERAL_NAME *location;
} ACCESS_DESCRIPTION;

SKM_DEFINE_STACK_OF_INTERNAL(ACCESS_DESCRIPTION, ACCESS_DESCRIPTION,
ACCESS_DESCRIPTION)
#define sk_ACCESS_DESCRIPTION_num(sk)
OPENSSL_sk_num(ossl_check_const_ACCESS_DESCRIPTION_sk_type(sk))
#define sk_ACCESS_DESCRIPTION_value(sk,
 idx) ((ACCESS_DESCRIPTION
*)OPENSSL_sk_value(ossl_check_const_ACCESS_DESCRIPTION_sk_type(sk), (idx)))
#define sk_ACCESS_DESCRIPTION_new(cmp) ((STACK_OF(ACCESS_DESCRIPTION)
*)OPENSSL_sk_new(ossl_check_ACCESS_DESCRIPTION_compfunc_type(cmp)))
#define sk_ACCESS_DESCRIPTION_new_null() ((STACK_OF(ACCESS_DESCRIPTION)
*)OPENSSL_sk_new_null())
#define sk_ACCESS_DESCRIPTION_new_reserve(cmp, n) ((STACK_OF(ACCESS_DESCRIPTION)
*)OPENSSL_sk_new_reserve(ossl_check_ACCESS_DESCRIPTION_compfunc_type(cmp), (n)))
#define sk_ACCESS_DESCRIPTION_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_ACCESS_DESCRIPTION_sk_type(sk), (n))
#define sk_ACCESS_DESCRIPTION_free(sk)
OPENSSL_sk_free(ossl_check_ACCESS_DESCRIPTION_sk_type(sk))
#define sk_ACCESS_DESCRIPTION_zero(sk)
OPENSSL_sk_zero(ossl_check_ACCESS_DESCRIPTION_sk_type(sk))
#define sk_ACCESS_DESCRIPTION_delete(sk, i) ((ACCESS_DESCRIPTION
*)OPENSSL_sk_delete(ossl_check_ACCESS_DESCRIPTION_sk_type(sk), (i)))
#define sk_ACCESS_DESCRIPTION_delete_ptr(sk, ptr) ((ACCESS_DESCRIPTION
 *)OPENSSL_sk_delete_ptr(ossl_check_ACCESS_DESCRIPTION_sk_type(sk),
ossl_check_ACCESS_DESCRIPTION_type(ptr)))
#define sk_ACCESS_DESCRIPTION_push(sk, ptr)
OPENSSL_sk_push(ossl_check_ACCESS_DESCRIPTION_sk_type(sk),
ossl_check_ACCESS_DESCRIPTION_type(ptr))
#define sk_ACCESS_DESCRIPTION_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_ACCESS_DESCRIPTION_sk_type(sk),
ossl_check_ACCESS_DESCRIPTION_type(ptr))
#define sk_ACCESS_DESCRIPTION_pop(sk) ((ACCESS_DESCRIPTION
*)OPENSSL_sk_pop(ossl_check_ACCESS_DESCRIPTION_sk_type(sk)))
#define sk_ACCESS_DESCRIPTION_shift(sk) ((ACCESS_DESCRIPTION
*)OPENSSL_sk_shift(ossl_check_ACCESS_DESCRIPTION_sk_type(sk)))
#define sk_ACCESS_DESCRIPTION_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ACCESS_DESCRIPTION_sk_type(sk),ossl_check_ACCESS_DESCRIPTIO
N_freefunc_type(freefunc))
#define sk_ACCESS_DESCRIPTION_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_ACCESS_DESCRIPTION_sk_type(sk),
ossl_check_ACCESS_DESCRIPTION_type(ptr), (idx))
#define
 sk_ACCESS_DESCRIPTION_set(sk, idx, ptr) ((ACCESS_DESCRIPTION
*)OPENSSL_sk_set(ossl_check_ACCESS_DESCRIPTION_sk_type(sk), (idx),
```

ossl_check_ACCESS_DESCRIPTION_type(ptr)))
#define sk_ACCESS_DESCRIPTION_find(sk, ptr)
OPENSSL_sk_find(ossl_check_ACCESS_DESCRIPTION_sk_type(sk),
ossl_check_ACCESS_DESCRIPTION_type(ptr))
#define sk_ACCESS_DESCRIPTION_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_ACCESS_DESCRIPTION_sk_type(sk),
ossl_check_ACCESS_DESCRIPTION_type(ptr))
#define sk_ACCESS_DESCRIPTION_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ACCESS_DESCRIPTION_sk_type(sk),
ossl_check_ACCESS_DESCRIPTION_type(ptr), pnum)
#define sk_ACCESS_DESCRIPTION_sort(sk)
OPENSSL_sk_sort(ossl_check_ACCESS_DESCRIPTION_sk_type(sk))
#define sk_ACCESS_DESCRIPTION_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_ACCESS_DESCRIPTION_sk_type(sk))
#define sk_ACCESS_DESCRIPTION_dup(sk) ((STACK_OF(ACCESS_DESCRIPTION)
*)OPENSSL_sk_dup(ossl_check_const_ACCESS_DESCRIPTION_sk_type(sk)))
#define sk_ACCESS_DESCRIPTION_deep_copy(sk,
copyfunc, freefunc) ((STACK_OF(ACCESS_DESCRIPTION)
*)OPENSSL_sk_deep_copy(ossl_check_const_ACCESS_DESCRIPTION_sk_type(sk),
ossl_check_ACCESS_DESCRIPTION_copyfunc_type(copyfunc),
ossl_check_ACCESS_DESCRIPTION_freefunc_type(freefunc)))
#define sk_ACCESS_DESCRIPTION_set_cmp_func(sk, cmp)
((sk_ACCESS_DESCRIPTION_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ACCESS_DESCRIPTION_s
k_type(sk), ossl_check_ACCESS_DESCRIPTION_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(GENERAL_NAME, GENERAL_NAME, GENERAL_NAME)
#define sk_GENERAL_NAME_num(sk) OPENSSL_sk_num(ossl_check_const_GENERAL_NAME_sk_type(sk))
#define sk_GENERAL_NAME_value(sk, idx) ((GENERAL_NAME
*)OPENSSL_sk_value(ossl_check_const_GENERAL_NAME_sk_type(sk), (idx)))
#define sk_GENERAL_NAME_new(cmp) ((STACK_OF(GENERAL_NAME)
*)OPENSSL_sk_new(ossl_check_GENERAL_NAME_compfunc_type(cmp)))
#define sk_GENERAL_NAME_new_null() ((STACK_OF(GENERAL_NAME) *)OPENSSL_sk_new_null())
#define sk_GENERAL_NAME_new_reserve(cmp, n) ((STACK_OF(GENERAL_NAME)
*)OPENSSL_sk_new_reserve(ossl_check_GENERAL_NAME_compfunc_type(cmp), (n)))
#define sk_GENERAL_NAME_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_GENERAL_NAME_sk_type(sk),
(n))
#define sk_GENERAL_NAME_free(sk) OPENSSL_sk_free(ossl_check_GENERAL_NAME_sk_type(sk))
#define sk_GENERAL_NAME_zero(sk) OPENSSL_sk_zero(ossl_check_GENERAL_NAME_sk_type(sk))
#define sk_GENERAL_NAME_delete(sk, i) ((GENERAL_NAME
*)OPENSSL_sk_delete(ossl_check_GENERAL_NAME_sk_type(sk), (i)))
#define sk_GENERAL_NAME_delete_ptr(sk, ptr) ((GENERAL_NAME
*)OPENSSL_sk_delete_ptr(ossl_check_GENERAL_NAME_sk_type(sk),
ossl_check_GENERAL_NAME_type(ptr)))
#define sk_GENERAL_NAME_push(sk, ptr) OPENSSL_sk_push(ossl_check_GENERAL_NAME_sk_type(sk),
ossl_check_GENERAL_NAME_type(ptr))
#define sk_GENERAL_NAME_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_GENERAL_NAME_sk_type(sk), ossl_check_GENERAL_NAME_type(ptr))
#define sk_GENERAL_NAME_pop(sk) ((GENERAL_NAME
*)OPENSSL_sk_pop(ossl_check_GENERAL_NAME_sk_type(sk)))

```
#define
 sk_GENERAL_NAME_shift(sk) ((GENERAL_NAME
*)OPENSSL_sk_shift(ossl_check_GENERAL_NAME_sk_type(sk)))
#define sk_GENERAL_NAME_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_GENERAL_NAME_sk_type(sk),ossl_check_GENERAL_NAME_freefunc_ty
pe(freefunc))
#define sk_GENERAL_NAME_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_GENERAL_NAME_sk_type(sk), ossl_check_GENERAL_NAME_type(ptr),
(idx))
#define sk_GENERAL_NAME_set(sk, idx, ptr) ((GENERAL_NAME
*)OPENSSL_sk_set(ossl_check_GENERAL_NAME_sk_type(sk), (idx),
ossl_check_GENERAL_NAME_type(ptr)))
#define sk_GENERAL_NAME_find(sk, ptr) OPENSSL_sk_find(ossl_check_GENERAL_NAME_sk_type(sk),
ossl_check_GENERAL_NAME_type(ptr))
#define sk_GENERAL_NAME_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_GENERAL_NAME_sk_type(sk), ossl_check_GENERAL_NAME_type(ptr))
#define sk_GENERAL_NAME_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_GENERAL_NAME_sk_type(sk), ossl_check_GENERAL_NAME_type(ptr),
pnum)
#define sk_GENERAL_NAME_sort(sk) OPENSSL_sk_sort(ossl_check_GENERAL_NAME_sk_type(sk))
#define
 sk_GENERAL_NAME_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_GENERAL_NAME_sk_type(sk))
#define sk_GENERAL_NAME_dup(sk) ((STACK_OF(GENERAL_NAME)
*)OPENSSL_sk_dup(ossl_check_const_GENERAL_NAME_sk_type(sk)))
#define sk_GENERAL_NAME_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(GENERAL_NAME)
*)OPENSSL_sk_deep_copy(ossl_check_const_GENERAL_NAME_sk_type(sk),
ossl_check_GENERAL_NAME_copyfunc_type(copyfunc),
ossl_check_GENERAL_NAME_freefunc_type(freefunc)))
#define sk_GENERAL_NAME_set_cmp_func(sk, cmp)
((sk_GENERAL_NAME_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_GENERAL_NAME_sk_type(sk),
ossl_check_GENERAL_NAME_compfunc_type(cmp)))


typedef STACK_OF(ACCESS_DESCRIPTION) AUTHORITY_INFO_ACCESS;
typedef STACK_OF(ASN1_OBJECT) EXTENDED_KEY_USAGE;
typedef STACK_OF(ASN1_INTEGER) TLS_FEATURE;
typedef STACK_OF(GENERAL_NAME) GENERAL_NAMES;

SKM_DEFINE_STACK_OF_INTERNAL(GENERAL_NAMES, GENERAL_NAMES, GENERAL_NAMES)
#define sk_GENERAL_NAMES_num(sk)
OPENSSL_sk_num(ossl_check_const_GENERAL_NAMES_sk_type(sk))
#define
 sk_GENERAL_NAMES_value(sk, idx) ((GENERAL_NAMES
*)OPENSSL_sk_value(ossl_check_const_GENERAL_NAMES_sk_type(sk), (idx)))
#define sk_GENERAL_NAMES_new(cmp) ((STACK_OF(GENERAL_NAMES)
*)OPENSSL_sk_new(ossl_check_GENERAL_NAMES_compfunc_type(cmp)))
#define sk_GENERAL_NAMES_new_null() ((STACK_OF(GENERAL_NAMES) *)OPENSSL_sk_new_null())
```

#define sk_GENERAL_NAMES_new_reserve(cmp, n) ((STACK_OF(GENERAL_NAMES)
*)OPENSSL_sk_new_reserve(ossl_check_GENERAL_NAMES_compfunc_type(cmp), (n)))
#define sk_GENERAL_NAMES_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_GENERAL_NAMES_sk_type(sk), (n))
#define sk_GENERAL_NAMES_free(sk) OPENSSL_sk_free(ossl_check_GENERAL_NAMES_sk_type(sk))
#define sk_GENERAL_NAMES_zero(sk) OPENSSL_sk_zero(ossl_check_GENERAL_NAMES_sk_type(sk))
#define sk_GENERAL_NAMES_delete(sk, i) ((GENERAL_NAMES
*)OPENSSL_sk_delete(ossl_check_GENERAL_NAMES_sk_type(sk), (i)))
#define sk_GENERAL_NAMES_delete_ptr(sk, ptr) ((GENERAL_NAMES
*)OPENSSL_sk_delete_ptr(ossl_check_GENERAL_NAMES_sk_type(sk),
ossl_check_GENERAL_NAMES_type(ptr)))
#define sk_GENERAL_NAMES_push(sk, ptr) OPENSSL_sk_push(ossl_check_GENERAL_NAMES_sk_type(sk),
ossl_check_GENERAL_NAMES_type(ptr))
#define sk_GENERAL_NAMES_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_GENERAL_NAMES_sk_type(sk), ossl_check_GENERAL_NAMES_type(ptr))
#define sk_GENERAL_NAMES_pop(sk) ((GENERAL_NAMES
*)OPENSSL_sk_pop(ossl_check_GENERAL_NAMES_sk_type(sk)))
#define sk_GENERAL_NAMES_shift(sk) ((GENERAL_NAMES
*)OPENSSL_sk_shift(ossl_check_GENERAL_NAMES_sk_type(sk)))
#define sk_GENERAL_NAMES_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_GENERAL_NAMES_sk_type(sk),ossl_check_GENERAL_NAMES_freefunc
_type(freefunc))
#define sk_GENERAL_NAMES_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_GENERAL_NAMES_sk_type(sk), ossl_check_GENERAL_NAMES_type(ptr),
(idx))
#define sk_GENERAL_NAMES_set(sk, idx, ptr) ((GENERAL_NAMES
*)OPENSSL_sk_set(ossl_check_GENERAL_NAMES_sk_type(sk), (idx),
ossl_check_GENERAL_NAMES_type(ptr)))
#define
sk_GENERAL_NAMES_find(sk, ptr) OPENSSL_sk_find(ossl_check_GENERAL_NAMES_sk_type(sk),
ossl_check_GENERAL_NAMES_type(ptr))
#define sk_GENERAL_NAMES_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_GENERAL_NAMES_sk_type(sk), ossl_check_GENERAL_NAMES_type(ptr))
#define sk_GENERAL_NAMES_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_GENERAL_NAMES_sk_type(sk), ossl_check_GENERAL_NAMES_type(ptr),
pnum)
#define sk_GENERAL_NAMES_sort(sk) OPENSSL_sk_sort(ossl_check_GENERAL_NAMES_sk_type(sk))
#define sk_GENERAL_NAMES_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_GENERAL_NAMES_sk_type(sk))
#define sk_GENERAL_NAMES_dup(sk) ((STACK_OF(GENERAL_NAMES)
*)OPENSSL_sk_dup(ossl_check_const_GENERAL_NAMES_sk_type(sk)))
#define sk_GENERAL_NAMES_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(GENERAL_NAMES)
*)OPENSSL_sk_deep_copy(ossl_check_const_GENERAL_NAMES_sk_type(sk),
ossl_check_GENERAL_NAMES_copyfunc_type(copyfunc),
ossl_check_GENERAL_NAMES_freefunc_type(freefunc)))
#define
sk_GENERAL_NAMES_set_cmp_func(sk, cmp)
((sk_GENERAL_NAMES_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_GENERAL_NAMES_sk_type(sk),

```
ossl_check_GENERAL_NAMES_compfunc_type(cmp)))


typedef struct DIST_POINT_NAME_st {
  int type;
  union {
     GENERAL_NAMES *fullname;
     STACK_OF(X509_NAME_ENTRY) *relativename;
  } name;
/* If relativename then this contains the full distribution point name */
  X509_NAME *dpname;
} DIST_POINT_NAME;
/* All existing reasons */
# define CRLDP_ALL_REASONS       0x807f

# define CRL_REASON_NONE                  -1
# define CRL_REASON_UNSPECIFIED            0
# define CRL_REASON_KEY_COMPROMISE         1
# define CRL_REASON_CA_COMPROMISE          2
# define CRL_REASON_AFFILIATION_CHANGED    3
# define CRL_REASON_SUPERSEDED             4
# define CRL_REASON_CESSATION_OF_OPERATION 5
# define CRL_REASON_CERTIFICATE_HOLD       6
# define CRL_REASON_REMOVE_FROM_CRL        8
#
 define CRL_REASON_PRIVILEGE_WITHDRAWN    9
# define CRL_REASON_AA_COMPROMISE         10

struct DIST_POINT_st {
  DIST_POINT_NAME *distpoint;
  ASN1_BIT_STRING *reasons;
  GENERAL_NAMES *CRLissuer;
  int dp_reasons;
};

SKM_DEFINE_STACK_OF_INTERNAL(DIST_POINT, DIST_POINT, DIST_POINT)
#define sk_DIST_POINT_num(sk) OPENSSL_sk_num(ossl_check_const_DIST_POINT_sk_type(sk))
#define sk_DIST_POINT_value(sk, idx) ((DIST_POINT
*)OPENSSL_sk_value(ossl_check_const_DIST_POINT_sk_type(sk), (idx)))
#define sk_DIST_POINT_new(cmp) ((STACK_OF(DIST_POINT)
*)OPENSSL_sk_new(ossl_check_DIST_POINT_compfunc_type(cmp)))
#define sk_DIST_POINT_new_null() ((STACK_OF(DIST_POINT) *)OPENSSL_sk_new_null())
#define sk_DIST_POINT_new_reserve(cmp, n) ((STACK_OF(DIST_POINT)
*)OPENSSL_sk_new_reserve(ossl_check_DIST_POINT_compfunc_type(cmp), (n)))
#define sk_DIST_POINT_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_DIST_POINT_sk_type(sk), (n))
#define sk_DIST_POINT_free(sk) OPENSSL_sk_free(ossl_check_DIST_POINT_sk_type(sk))
#define
```

```
 sk_DIST_POINT_zero(sk) OPENSSL_sk_zero(ossl_check_DIST_POINT_sk_type(sk))
#define sk_DIST_POINT_delete(sk, i) ((DIST_POINT
*)OPENSSL_sk_delete(ossl_check_DIST_POINT_sk_type(sk), (i)))
#define sk_DIST_POINT_delete_ptr(sk, ptr) ((DIST_POINT
*)OPENSSL_sk_delete_ptr(ossl_check_DIST_POINT_sk_type(sk), ossl_check_DIST_POINT_type(ptr)))
#define sk_DIST_POINT_push(sk, ptr) OPENSSL_sk_push(ossl_check_DIST_POINT_sk_type(sk),
ossl_check_DIST_POINT_type(ptr))
#define sk_DIST_POINT_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_DIST_POINT_sk_type(sk),
ossl_check_DIST_POINT_type(ptr))
#define sk_DIST_POINT_pop(sk) ((DIST_POINT *)OPENSSL_sk_pop(ossl_check_DIST_POINT_sk_type(sk)))
#define sk_DIST_POINT_shift(sk) ((DIST_POINT *)OPENSSL_sk_shift(ossl_check_DIST_POINT_sk_type(sk)))
#define sk_DIST_POINT_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_DIST_POINT_sk_type(sk),ossl_check_DIST_POINT_freefunc_type(freefunc)
)
#define sk_DIST_POINT_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_DIST_POINT_sk_type(sk),
 ossl_check_DIST_POINT_type(ptr), (idx))
#define sk_DIST_POINT_set(sk, idx, ptr) ((DIST_POINT
*)OPENSSL_sk_set(ossl_check_DIST_POINT_sk_type(sk), (idx), ossl_check_DIST_POINT_type(ptr)))
#define sk_DIST_POINT_find(sk, ptr) OPENSSL_sk_find(ossl_check_DIST_POINT_sk_type(sk),
ossl_check_DIST_POINT_type(ptr))
#define sk_DIST_POINT_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_DIST_POINT_sk_type(sk),
ossl_check_DIST_POINT_type(ptr))
#define sk_DIST_POINT_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_DIST_POINT_sk_type(sk),
ossl_check_DIST_POINT_type(ptr), pnum)
#define sk_DIST_POINT_sort(sk) OPENSSL_sk_sort(ossl_check_DIST_POINT_sk_type(sk))
#define sk_DIST_POINT_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_DIST_POINT_sk_type(sk))
#define sk_DIST_POINT_dup(sk) ((STACK_OF(DIST_POINT)
*)OPENSSL_sk_dup(ossl_check_const_DIST_POINT_sk_type(sk)))
#define sk_DIST_POINT_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(DIST_POINT)
*)OPENSSL_sk_deep_copy(ossl_check_const_DIST_POINT_sk_type(sk),
 ossl_check_DIST_POINT_copyfunc_type(copyfunc), ossl_check_DIST_POINT_freefunc_type(freefunc)))
#define sk_DIST_POINT_set_cmp_func(sk, cmp)
((sk_DIST_POINT_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_DIST_POINT_sk_type(sk),
ossl_check_DIST_POINT_compfunc_type(cmp)))


typedef STACK_OF(DIST_POINT) CRL_DIST_POINTS;

struct AUTHORITY_KEYID_st {
  ASN1_OCTET_STRING *keyid;
  GENERAL_NAMES *issuer;
  ASN1_INTEGER *serial;
};

/* Strong extranet structures */

typedef struct SXNET_ID_st {
  ASN1_INTEGER *zone;
```

```
  ASN1_OCTET_STRING *user;
} SXNETID;

SKM_DEFINE_STACK_OF_INTERNAL(SXNETID, SXNETID, SXNETID)
#define sk_SXNETID_num(sk) OPENSSL_sk_num(ossl_check_const_SXNETID_sk_type(sk))
#define sk_SXNETID_value(sk, idx) ((SXNETID
*)OPENSSL_sk_value(ossl_check_const_SXNETID_sk_type(sk), (idx)))
#define sk_SXNETID_new(cmp) ((STACK_OF(SXNETID)
*)OPENSSL_sk_new(ossl_check_SXNETID_compfunc_type(cmp)))
#define sk_SXNETID_new_null() ((STACK_OF(SXNETID)
 *)OPENSSL_sk_new_null())
#define sk_SXNETID_new_reserve(cmp, n) ((STACK_OF(SXNETID)
*)OPENSSL_sk_new_reserve(ossl_check_SXNETID_compfunc_type(cmp), (n)))
#define sk_SXNETID_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_SXNETID_sk_type(sk), (n))
#define sk_SXNETID_free(sk) OPENSSL_sk_free(ossl_check_SXNETID_sk_type(sk))
#define sk_SXNETID_zero(sk) OPENSSL_sk_zero(ossl_check_SXNETID_sk_type(sk))
#define sk_SXNETID_delete(sk, i) ((SXNETID *)OPENSSL_sk_delete(ossl_check_SXNETID_sk_type(sk), (i)))
#define sk_SXNETID_delete_ptr(sk, ptr) ((SXNETID
*)OPENSSL_sk_delete_ptr(ossl_check_SXNETID_sk_type(sk), ossl_check_SXNETID_type(ptr)))
#define sk_SXNETID_push(sk, ptr) OPENSSL_sk_push(ossl_check_SXNETID_sk_type(sk),
ossl_check_SXNETID_type(ptr))
#define sk_SXNETID_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_SXNETID_sk_type(sk),
ossl_check_SXNETID_type(ptr))
#define sk_SXNETID_pop(sk) ((SXNETID *)OPENSSL_sk_pop(ossl_check_SXNETID_sk_type(sk)))
#define sk_SXNETID_shift(sk) ((SXNETID *)OPENSSL_sk_shift(ossl_check_SXNETID_sk_type(sk)))
#define
 sk_SXNETID_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_SXNETID_sk_type(sk),ossl_check_SXNETID_freefunc_type(freefunc))
#define sk_SXNETID_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_SXNETID_sk_type(sk),
ossl_check_SXNETID_type(ptr), (idx))
#define sk_SXNETID_set(sk, idx, ptr) ((SXNETID *)OPENSSL_sk_set(ossl_check_SXNETID_sk_type(sk), (idx),
ossl_check_SXNETID_type(ptr)))
#define sk_SXNETID_find(sk, ptr) OPENSSL_sk_find(ossl_check_SXNETID_sk_type(sk),
ossl_check_SXNETID_type(ptr))
#define sk_SXNETID_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_SXNETID_sk_type(sk),
ossl_check_SXNETID_type(ptr))
#define sk_SXNETID_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_SXNETID_sk_type(sk),
ossl_check_SXNETID_type(ptr), pnum)
#define sk_SXNETID_sort(sk) OPENSSL_sk_sort(ossl_check_SXNETID_sk_type(sk))
#define sk_SXNETID_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_SXNETID_sk_type(sk))
#define sk_SXNETID_dup(sk)
 ((STACK_OF(SXNETID) *)OPENSSL_sk_dup(ossl_check_const_SXNETID_sk_type(sk)))
#define sk_SXNETID_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(SXNETID)
*)OPENSSL_sk_deep_copy(ossl_check_const_SXNETID_sk_type(sk),
ossl_check_SXNETID_copyfunc_type(copyfunc), ossl_check_SXNETID_freefunc_type(freefunc)))
#define sk_SXNETID_set_cmp_func(sk, cmp)
((sk_SXNETID_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_SXNETID_sk_type(sk),
ossl_check_SXNETID_compfunc_type(cmp)))
```

```
typedef struct SXNET_st {
  ASN1_INTEGER *version;
  STACK_OF(SXNETID) *ids;
} SXNET;

typedef struct ISSUER_SIGN_TOOL_st {
  ASN1_UTF8STRING *signTool;
  ASN1_UTF8STRING *cATool;
  ASN1_UTF8STRING *signToolCert;
  ASN1_UTF8STRING *cAToolCert;
} ISSUER_SIGN_TOOL;

typedef struct NOTICEREF_st {
  ASN1_STRING *organization;
  STACK_OF(ASN1_INTEGER) *noticenos;
} NOTICEREF;

typedef struct USERNOTICE_st {
  NOTICEREF *noticeref;
  ASN1_STRING *exptext;
} USERNOTICE;

typedef struct POLICYQUALINFO_st {
  ASN1_OBJECT
 *pqualid;
  union {
     ASN1_IA5STRING *cpsuri;
     USERNOTICE *usernotice;
     ASN1_TYPE *other;
  } d;
} POLICYQUALINFO;

SKM_DEFINE_STACK_OF_INTERNAL(POLICYQUALINFO, POLICYQUALINFO, POLICYQUALINFO)
#define sk_POLICYQUALINFO_num(sk)
OPENSSL_sk_num(ossl_check_const_POLICYQUALINFO_sk_type(sk))
#define sk_POLICYQUALINFO_value(sk, idx) ((POLICYQUALINFO
*)OPENSSL_sk_value(ossl_check_const_POLICYQUALINFO_sk_type(sk), (idx)))
#define sk_POLICYQUALINFO_new(cmp) ((STACK_OF(POLICYQUALINFO)
*)OPENSSL_sk_new(ossl_check_POLICYQUALINFO_compfunc_type(cmp)))
#define sk_POLICYQUALINFO_new_null() ((STACK_OF(POLICYQUALINFO) *)OPENSSL_sk_new_null())
#define sk_POLICYQUALINFO_new_reserve(cmp, n) ((STACK_OF(POLICYQUALINFO)
*)OPENSSL_sk_new_reserve(ossl_check_POLICYQUALINFO_compfunc_type(cmp), (n)))
#define sk_POLICYQUALINFO_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_POLICYQUALINFO_sk_type(sk), (n))
#define sk_POLICYQUALINFO_free(sk) OPENSSL_sk_free(ossl_check_POLICYQUALINFO_sk_type(sk))
```

```
#define
 sk_POLICYQUALINFO_zero(sk) OPENSSL_sk_zero(ossl_check_POLICYQUALINFO_sk_type(sk))
#define sk_POLICYQUALINFO_delete(sk, i) ((POLICYQUALINFO
*)OPENSSL_sk_delete(ossl_check_POLICYQUALINFO_sk_type(sk), (i)))
#define sk_POLICYQUALINFO_delete_ptr(sk, ptr) ((POLICYQUALINFO
*)OPENSSL_sk_delete_ptr(ossl_check_POLICYQUALINFO_sk_type(sk),
ossl_check_POLICYQUALINFO_type(ptr)))
#define sk_POLICYQUALINFO_push(sk, ptr) OPENSSL_sk_push(ossl_check_POLICYQUALINFO_sk_type(sk),
ossl_check_POLICYQUALINFO_type(ptr))
#define sk_POLICYQUALINFO_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_POLICYQUALINFO_sk_type(sk), ossl_check_POLICYQUALINFO_type(ptr))
#define sk_POLICYQUALINFO_pop(sk) ((POLICYQUALINFO
*)OPENSSL_sk_pop(ossl_check_POLICYQUALINFO_sk_type(sk)))
#define sk_POLICYQUALINFO_shift(sk) ((POLICYQUALINFO
*)OPENSSL_sk_shift(ossl_check_POLICYQUALINFO_sk_type(sk)))
#define sk_POLICYQUALINFO_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_POLICYQUALINFO_sk_type(sk),ossl_check_POLICYQUALINFO_freefunc
_type(freefunc))
#define
 sk_POLICYQUALINFO_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_POLICYQUALINFO_sk_type(sk),
ossl_check_POLICYQUALINFO_type(ptr), (idx))
#define sk_POLICYQUALINFO_set(sk, idx, ptr) ((POLICYQUALINFO
*)OPENSSL_sk_set(ossl_check_POLICYQUALINFO_sk_type(sk), (idx),
ossl_check_POLICYQUALINFO_type(ptr)))
#define sk_POLICYQUALINFO_find(sk, ptr) OPENSSL_sk_find(ossl_check_POLICYQUALINFO_sk_type(sk),
ossl_check_POLICYQUALINFO_type(ptr))
#define sk_POLICYQUALINFO_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_POLICYQUALINFO_sk_type(sk),
ossl_check_POLICYQUALINFO_type(ptr))
#define sk_POLICYQUALINFO_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_POLICYQUALINFO_sk_type(sk), ossl_check_POLICYQUALINFO_type(ptr),
pnum)
#define sk_POLICYQUALINFO_sort(sk) OPENSSL_sk_sort(ossl_check_POLICYQUALINFO_sk_type(sk))
#define sk_POLICYQUALINFO_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_POLICYQUALINFO_sk_type(sk))
#define sk_POLICYQUALINFO_dup(sk) ((STACK_OF(POLICYQUALINFO)
 *)OPENSSL_sk_dup(ossl_check_const_POLICYQUALINFO_sk_type(sk)))
#define sk_POLICYQUALINFO_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(POLICYQUALINFO)
*)OPENSSL_sk_deep_copy(ossl_check_const_POLICYQUALINFO_sk_type(sk),
ossl_check_POLICYQUALINFO_copyfunc_type(copyfunc),
ossl_check_POLICYQUALINFO_freefunc_type(freefunc)))
#define sk_POLICYQUALINFO_set_cmp_func(sk, cmp)
((sk_POLICYQUALINFO_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_POLICYQUALINFO_sk_type(sk),
ossl_check_POLICYQUALINFO_compfunc_type(cmp)))



typedef struct POLICYINFO_st {
```

```
  ASN1_OBJECT *policyid;
  STACK_OF(POLICYQUALINFO) *qualifiers;
} POLICYINFO;

SKM_DEFINE_STACK_OF_INTERNAL(POLICYINFO, POLICYINFO, POLICYINFO)
#define sk_POLICYINFO_num(sk) OPENSSL_sk_num(ossl_check_const_POLICYINFO_sk_type(sk))
#define sk_POLICYINFO_value(sk, idx) ((POLICYINFO
*)OPENSSL_sk_value(ossl_check_const_POLICYINFO_sk_type(sk), (idx)))
#define sk_POLICYINFO_new(cmp) ((STACK_OF(POLICYINFO)
*)OPENSSL_sk_new(ossl_check_POLICYINFO_compfunc_type(cmp)))
#define
 sk_POLICYINFO_new_null() ((STACK_OF(POLICYINFO) *)OPENSSL_sk_new_null())
#define sk_POLICYINFO_new_reserve(cmp, n) ((STACK_OF(POLICYINFO)
*)OPENSSL_sk_new_reserve(ossl_check_POLICYINFO_compfunc_type(cmp), (n)))
#define sk_POLICYINFO_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_POLICYINFO_sk_type(sk), (n))
#define sk_POLICYINFO_free(sk) OPENSSL_sk_free(ossl_check_POLICYINFO_sk_type(sk))
#define sk_POLICYINFO_zero(sk) OPENSSL_sk_zero(ossl_check_POLICYINFO_sk_type(sk))
#define sk_POLICYINFO_delete(sk, i) ((POLICYINFO
*)OPENSSL_sk_delete(ossl_check_POLICYINFO_sk_type(sk), (i)))
#define sk_POLICYINFO_delete_ptr(sk, ptr) ((POLICYINFO
*)OPENSSL_sk_delete_ptr(ossl_check_POLICYINFO_sk_type(sk), ossl_check_POLICYINFO_type(ptr)))
#define sk_POLICYINFO_push(sk, ptr) OPENSSL_sk_push(ossl_check_POLICYINFO_sk_type(sk),
ossl_check_POLICYINFO_type(ptr))
#define sk_POLICYINFO_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_POLICYINFO_sk_type(sk),
ossl_check_POLICYINFO_type(ptr))
#define
 sk_POLICYINFO_pop(sk) ((POLICYINFO *)OPENSSL_sk_pop(ossl_check_POLICYINFO_sk_type(sk)))
#define sk_POLICYINFO_shift(sk) ((POLICYINFO
*)OPENSSL_sk_shift(ossl_check_POLICYINFO_sk_type(sk)))
#define sk_POLICYINFO_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_POLICYINFO_sk_type(sk),ossl_check_POLICYINFO_freefunc_type(freefun
c))
#define sk_POLICYINFO_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_POLICYINFO_sk_type(sk),
ossl_check_POLICYINFO_type(ptr), (idx))
#define sk_POLICYINFO_set(sk, idx, ptr) ((POLICYINFO
*)OPENSSL_sk_set(ossl_check_POLICYINFO_sk_type(sk), (idx), ossl_check_POLICYINFO_type(ptr)))
#define sk_POLICYINFO_find(sk, ptr) OPENSSL_sk_find(ossl_check_POLICYINFO_sk_type(sk),
ossl_check_POLICYINFO_type(ptr))
#define sk_POLICYINFO_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_POLICYINFO_sk_type(sk),
ossl_check_POLICYINFO_type(ptr))
#define sk_POLICYINFO_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_POLICYINFO_sk_type(sk),
ossl_check_POLICYINFO_type(ptr),
 pnum)
#define sk_POLICYINFO_sort(sk) OPENSSL_sk_sort(ossl_check_POLICYINFO_sk_type(sk))
#define sk_POLICYINFO_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_POLICYINFO_sk_type(sk))
#define sk_POLICYINFO_dup(sk) ((STACK_OF(POLICYINFO)
*)OPENSSL_sk_dup(ossl_check_const_POLICYINFO_sk_type(sk)))
#define sk_POLICYINFO_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(POLICYINFO)
```

*)OPENSSL_sk_deep_copy(ossl_check_const_POLICYINFO_sk_type(sk),
ossl_check_POLICYINFO_copyfunc_type(copyfunc), ossl_check_POLICYINFO_freefunc_type(freefunc)))
#define sk_POLICYINFO_set_cmp_func(sk, cmp)
((sk_POLICYINFO_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_POLICYINFO_sk_type(sk),
ossl_check_POLICYINFO_compfunc_type(cmp)))

typedef STACK_OF(POLICYINFO) CERTIFICATEPOLICIES;

typedef struct POLICY_MAPPING_st {
  ASN1_OBJECT *issuerDomainPolicy;
  ASN1_OBJECT *subjectDomainPolicy;
} POLICY_MAPPING;

SKM_DEFINE_STACK_OF_INTERNAL(POLICY_MAPPING, POLICY_MAPPING, POLICY_MAPPING)
#define sk_POLICY_MAPPING_num(sk)
 OPENSSL_sk_num(ossl_check_const_POLICY_MAPPING_sk_type(sk))
#define sk_POLICY_MAPPING_value(sk, idx) ((POLICY_MAPPING
*)OPENSSL_sk_value(ossl_check_const_POLICY_MAPPING_sk_type(sk), (idx)))
#define sk_POLICY_MAPPING_new(cmp) ((STACK_OF(POLICY_MAPPING)
*)OPENSSL_sk_new(ossl_check_POLICY_MAPPING_compfunc_type(cmp)))
#define sk_POLICY_MAPPING_new_null() ((STACK_OF(POLICY_MAPPING) *)OPENSSL_sk_new_null())
#define sk_POLICY_MAPPING_new_reserve(cmp, n) ((STACK_OF(POLICY_MAPPING)
*)OPENSSL_sk_new_reserve(ossl_check_POLICY_MAPPING_compfunc_type(cmp), (n)))
#define sk_POLICY_MAPPING_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_POLICY_MAPPING_sk_type(sk), (n))
#define sk_POLICY_MAPPING_free(sk) OPENSSL_sk_free(ossl_check_POLICY_MAPPING_sk_type(sk))
#define sk_POLICY_MAPPING_zero(sk) OPENSSL_sk_zero(ossl_check_POLICY_MAPPING_sk_type(sk))
#define sk_POLICY_MAPPING_delete(sk, i) ((POLICY_MAPPING
*)OPENSSL_sk_delete(ossl_check_POLICY_MAPPING_sk_type(sk), (i)))
#define sk_POLICY_MAPPING_delete_ptr(sk,
 ptr) ((POLICY_MAPPING *)OPENSSL_sk_delete_ptr(ossl_check_POLICY_MAPPING_sk_type(sk),
ossl_check_POLICY_MAPPING_type(ptr)))
#define sk_POLICY_MAPPING_push(sk, ptr) OPENSSL_sk_push(ossl_check_POLICY_MAPPING_sk_type(sk),
ossl_check_POLICY_MAPPING_type(ptr))
#define sk_POLICY_MAPPING_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_POLICY_MAPPING_sk_type(sk), ossl_check_POLICY_MAPPING_type(ptr))
#define sk_POLICY_MAPPING_pop(sk) ((POLICY_MAPPING
*)OPENSSL_sk_pop(ossl_check_POLICY_MAPPING_sk_type(sk)))
#define sk_POLICY_MAPPING_shift(sk) ((POLICY_MAPPING
*)OPENSSL_sk_shift(ossl_check_POLICY_MAPPING_sk_type(sk)))
#define sk_POLICY_MAPPING_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_POLICY_MAPPING_sk_type(sk),ossl_check_POLICY_MAPPING_freefunc
_type(freefunc))
#define sk_POLICY_MAPPING_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_POLICY_MAPPING_sk_type(sk), ossl_check_POLICY_MAPPING_type(ptr),
(idx))
#define sk_POLICY_MAPPING_set(sk, idx, ptr) ((POLICY_MAPPING

*)OPENSSL_sk_set(ossl_check_POLICY_MAPPING_sk_type(sk),
(idx), ossl_check_POLICY_MAPPING_type(ptr)))
#define sk_POLICY_MAPPING_find(sk, ptr) OPENSSL_sk_find(ossl_check_POLICY_MAPPING_sk_type(sk),
ossl_check_POLICY_MAPPING_type(ptr))
#define sk_POLICY_MAPPING_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_POLICY_MAPPING_sk_type(sk), ossl_check_POLICY_MAPPING_type(ptr))
#define sk_POLICY_MAPPING_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_POLICY_MAPPING_sk_type(sk), ossl_check_POLICY_MAPPING_type(ptr),
pnum)
#define sk_POLICY_MAPPING_sort(sk) OPENSSL_sk_sort(ossl_check_POLICY_MAPPING_sk_type(sk))
#define sk_POLICY_MAPPING_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_POLICY_MAPPING_sk_type(sk))
#define sk_POLICY_MAPPING_dup(sk) ((STACK_OF(POLICY_MAPPING)
*)OPENSSL_sk_dup(ossl_check_const_POLICY_MAPPING_sk_type(sk)))
#define sk_POLICY_MAPPING_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(POLICY_MAPPING)
*)OPENSSL_sk_deep_copy(ossl_check_const_POLICY_MAPPING_sk_type(sk),
ossl_check_POLICY_MAPPING_copyfunc_type(copyfunc),
ossl_check_POLICY_MAPPING_freefunc_type(freefunc)))
#define sk_POLICY_MAPPING_set_cmp_func(sk, cmp)
((sk_POLICY_MAPPING_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_POLICY_MAPPING_sk_type(sk),
ossl_check_POLICY_MAPPING_compfunc_type(cmp)))

typedef STACK_OF(POLICY_MAPPING) POLICY_MAPPINGS;

typedef struct GENERAL_SUBTREE_st {
  GENERAL_NAME *base;
  ASN1_INTEGER *minimum;
  ASN1_INTEGER *maximum;
} GENERAL_SUBTREE;

SKM_DEFINE_STACK_OF_INTERNAL(GENERAL_SUBTREE, GENERAL_SUBTREE,
GENERAL_SUBTREE)
#define sk_GENERAL_SUBTREE_num(sk)
OPENSSL_sk_num(ossl_check_const_GENERAL_SUBTREE_sk_type(sk))
#define sk_GENERAL_SUBTREE_value(sk, idx) ((GENERAL_SUBTREE
*)OPENSSL_sk_value(ossl_check_const_GENERAL_SUBTREE_sk_type(sk), (idx)))
#define sk_GENERAL_SUBTREE_new(cmp) ((STACK_OF(GENERAL_SUBTREE)
*)OPENSSL_sk_new(ossl_check_GENERAL_SUBTREE_compfunc_type(cmp)))
#define sk_GENERAL_SUBTREE_new_null() ((STACK_OF(GENERAL_SUBTREE)
*)OPENSSL_sk_new_null())
#define
sk_GENERAL_SUBTREE_new_reserve(cmp, n) ((STACK_OF(GENERAL_SUBTREE)
*)OPENSSL_sk_new_reserve(ossl_check_GENERAL_SUBTREE_compfunc_type(cmp), (n)))
#define sk_GENERAL_SUBTREE_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_GENERAL_SUBTREE_sk_type(sk), (n))
#define sk_GENERAL_SUBTREE_free(sk) OPENSSL_sk_free(ossl_check_GENERAL_SUBTREE_sk_type(sk))
#define sk_GENERAL_SUBTREE_zero(sk) OPENSSL_sk_zero(ossl_check_GENERAL_SUBTREE_sk_type(sk))

#define sk_GENERAL_SUBTREE_delete(sk, i) ((GENERAL_SUBTREE
*)OPENSSL_sk_delete(ossl_check_GENERAL_SUBTREE_sk_type(sk), (i)))
#define sk_GENERAL_SUBTREE_delete_ptr(sk, ptr) ((GENERAL_SUBTREE
*)OPENSSL_sk_delete_ptr(ossl_check_GENERAL_SUBTREE_sk_type(sk),
ossl_check_GENERAL_SUBTREE_type(ptr)))
#define sk_GENERAL_SUBTREE_push(sk, ptr)
OPENSSL_sk_push(ossl_check_GENERAL_SUBTREE_sk_type(sk),
ossl_check_GENERAL_SUBTREE_type(ptr))
#define sk_GENERAL_SUBTREE_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_GENERAL_SUBTREE_sk_type(sk),
ossl_check_GENERAL_SUBTREE_type(ptr))
#define
sk_GENERAL_SUBTREE_pop(sk) ((GENERAL_SUBTREE
*)OPENSSL_sk_pop(ossl_check_GENERAL_SUBTREE_sk_type(sk)))
#define sk_GENERAL_SUBTREE_shift(sk) ((GENERAL_SUBTREE
*)OPENSSL_sk_shift(ossl_check_GENERAL_SUBTREE_sk_type(sk)))
#define sk_GENERAL_SUBTREE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_GENERAL_SUBTREE_sk_type(sk),ossl_check_GENERAL_SUBTREE_free
func_type(freefunc))
#define sk_GENERAL_SUBTREE_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_GENERAL_SUBTREE_sk_type(sk),
ossl_check_GENERAL_SUBTREE_type(ptr), (idx))
#define sk_GENERAL_SUBTREE_set(sk, idx, ptr) ((GENERAL_SUBTREE
*)OPENSSL_sk_set(ossl_check_GENERAL_SUBTREE_sk_type(sk), (idx),
ossl_check_GENERAL_SUBTREE_type(ptr)))
#define sk_GENERAL_SUBTREE_find(sk, ptr)
OPENSSL_sk_find(ossl_check_GENERAL_SUBTREE_sk_type(sk),
ossl_check_GENERAL_SUBTREE_type(ptr))
#define sk_GENERAL_SUBTREE_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_GENERAL_SUBTREE_sk_type(sk),
ossl_check_GENERAL_SUBTREE_type(ptr))
#define sk_GENERAL_SUBTREE_find_all(sk,
ptr, pnum) OPENSSL_sk_find_all(ossl_check_GENERAL_SUBTREE_sk_type(sk),
ossl_check_GENERAL_SUBTREE_type(ptr), pnum)
#define sk_GENERAL_SUBTREE_sort(sk) OPENSSL_sk_sort(ossl_check_GENERAL_SUBTREE_sk_type(sk))
#define sk_GENERAL_SUBTREE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_GENERAL_SUBTREE_sk_type(sk))
#define sk_GENERAL_SUBTREE_dup(sk) ((STACK_OF(GENERAL_SUBTREE)
*)OPENSSL_sk_dup(ossl_check_const_GENERAL_SUBTREE_sk_type(sk)))
#define sk_GENERAL_SUBTREE_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(GENERAL_SUBTREE)
*)OPENSSL_sk_deep_copy(ossl_check_const_GENERAL_SUBTREE_sk_type(sk),
ossl_check_GENERAL_SUBTREE_copyfunc_type(copyfunc),
ossl_check_GENERAL_SUBTREE_freefunc_type(freefunc)))
#define sk_GENERAL_SUBTREE_set_cmp_func(sk, cmp)
((sk_GENERAL_SUBTREE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_GENERAL_SUBTREE_sk_type
(sk), ossl_check_GENERAL_SUBTREE_compfunc_type(cmp)))

```
struct NAME_CONSTRAINTS_st {
  STACK_OF(GENERAL_SUBTREE) *permittedSubtrees;
   STACK_OF(GENERAL_SUBTREE) *excludedSubtrees;
};

typedef struct POLICY_CONSTRAINTS_st {
  ASN1_INTEGER *requireExplicitPolicy;
  ASN1_INTEGER *inhibitPolicyMapping;
} POLICY_CONSTRAINTS;

/* Proxy certificate structures, see RFC 3820 */
typedef struct PROXY_POLICY_st {
  ASN1_OBJECT *policyLanguage;
  ASN1_OCTET_STRING *policy;
} PROXY_POLICY;

typedef struct PROXY_CERT_INFO_EXTENSION_st {
  ASN1_INTEGER *pcPathLengthConstraint;
  PROXY_POLICY *proxyPolicy;
} PROXY_CERT_INFO_EXTENSION;

DECLARE_ASN1_FUNCTIONS(PROXY_POLICY)
DECLARE_ASN1_FUNCTIONS(PROXY_CERT_INFO_EXTENSION)

struct ISSUING_DIST_POINT_st {
  DIST_POINT_NAME *distpoint;
  int onlyuser;
  int onlyCA;
  ASN1_BIT_STRING *onlysomereasons;
  int indirectCRL;
  int onlyattr;
};

/* Values in idp_flags field */
/* IDP present */
# define IDP_PRESENT     0x1
/* IDP values inconsistent */
# define IDP_INVALID     0x2
/* onlyuser true */
# define IDP_ONLYUSER    0x4
/* onlyCA true */
# define IDP_ONLYCA
     0x8
/* onlyattr true */
# define IDP_ONLYATTR    0x10
/* indirectCRL true */
# define IDP_INDIRECT    0x20
/* onlysomereasons present */
```

```
# define IDP_REASONS     0x40

# define X509V3_conf_err(val) ERR_add_error_data(6, \
                    "section:", (val)->section, \
                    ",name:", (val)->name, ",value:", (val)->value)

# define X509V3_set_ctx_test(ctx) \
  X509V3_set_ctx(ctx, NULL, NULL, NULL, NULL, X509V3_CTX_TEST)
# define X509V3_set_ctx_nodb(ctx) (ctx)->db = NULL;

# define EXT_BITSTRING(nid, table) { nid, 0, ASN1_ITEM_ref(ASN1_BIT_STRING), \
                    0,0,0,0, \
                    0,0, \
                    (X509V3_EXT_I2V)i2v_ASN1_BIT_STRING, \
                    (X509V3_EXT_V2I)v2i_ASN1_BIT_STRING, \
                    NULL, NULL, \
                    table}

# define EXT_IA5STRING(nid) { nid, 0, ASN1_ITEM_ref(ASN1_IA5STRING), \
                    0,0,0,0, \
                    (X509V3_EXT_I2S)i2s_ASN1_IA5STRING,
 \
                    (X509V3_EXT_S2I)s2i_ASN1_IA5STRING, \
                    0,0,0,0, \
                    NULL}

#define EXT_UTF8STRING(nid) { nid, 0, ASN1_ITEM_ref(ASN1_UTF8STRING), \
                    0,0,0,0, \
                    (X509V3_EXT_I2S)i2s_ASN1_UTF8STRING, \
                    (X509V3_EXT_S2I)s2i_ASN1_UTF8STRING, \
                    0,0,0,0, \
                    NULL}

# define EXT_END { -1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0}

/* X509_PURPOSE stuff */

# define EXFLAG_BCONS            0x1
# define EXFLAG_KUSAGE           0x2
# define EXFLAG_XKUSAGE          0x4
# define EXFLAG_NSCERT           0x8

# define EXFLAG_CA               0x10
# define EXFLAG_SI               0x20 /* self-issued, maybe not self-signed */
# define EXFLAG_V1               0x40
# define EXFLAG_INVALID          0x80
/* EXFLAG_SET is set to indicate that some values have been precomputed */
# define EXFLAG_SET              0x100
```

```
# define
 EXFLAG_CRITICAL        0x200
# define EXFLAG_PROXY           0x400

# define EXFLAG_INVALID_POLICY   0x800
# define EXFLAG_FRESHEST        0x1000
# define EXFLAG_SS              0x2000 /* cert is apparently self-signed */

# define EXFLAG_BCONS_CRITICAL   0x10000
# define EXFLAG_AKID_CRITICAL    0x20000
# define EXFLAG_SKID_CRITICAL    0x40000
# define EXFLAG_SAN_CRITICAL     0x80000
# define EXFLAG_NO_FINGERPRINT   0x100000

# define KU_DIGITAL_SIGNATURE    0x0080
# define KU_NON_REPUDIATION      0x0040
# define KU_KEY_ENCIPHERMENT     0x0020
# define KU_DATA_ENCIPHERMENT    0x0010
# define KU_KEY_AGREEMENT        0x0008
# define KU_KEY_CERT_SIGN        0x0004
# define KU_CRL_SIGN             0x0002
# define KU_ENCIPHER_ONLY        0x0001
# define KU_DECIPHER_ONLY        0x8000

# define NS_SSL_CLIENT          0x80
# define NS_SSL_SERVER          0x40
# define NS_SMIME               0x20
# define NS_OBJSIGN             0x10
# define NS_SSL_CA              0x04
# define NS_SMIME_CA
          0x02
# define NS_OBJSIGN_CA          0x01
# define NS_ANY_CA              (NS_SSL_CA|NS_SMIME_CA|NS_OBJSIGN_CA)

# define XKU_SSL_SERVER         0x1
# define XKU_SSL_CLIENT         0x2
# define XKU_SMIME              0x4
# define XKU_CODE_SIGN          0x8
# define XKU_SGC                0x10 /* Netscape or MS Server-Gated Crypto */
# define XKU_OCSP_SIGN          0x20
# define XKU_TIMESTAMP          0x40
# define XKU_DVCS               0x80
# define XKU_ANYEKU             0x100

# define X509_PURPOSE_DYNAMIC    0x1
# define X509_PURPOSE_DYNAMIC_NAME       0x2

typedef struct x509_purpose_st {
```

```
  int purpose;
  int trust;                /* Default trust ID */
  int flags;
  int (*check_purpose) (const struct x509_purpose_st *, const X509 *, int);
  char *name;
  char *sname;
  void *usr_data;
} X509_PURPOSE;

SKM_DEFINE_STACK_OF_INTERNAL(X509_PURPOSE, X509_PURPOSE, X509_PURPOSE)
#define sk_X509_PURPOSE_num(sk) OPENSSL_sk_num(ossl_check_const_X509_PURPOSE_sk_type(sk))
#define
 sk_X509_PURPOSE_value(sk, idx) ((X509_PURPOSE
*)OPENSSL_sk_value(ossl_check_const_X509_PURPOSE_sk_type(sk), (idx)))
#define sk_X509_PURPOSE_new(cmp) ((STACK_OF(X509_PURPOSE)
*)OPENSSL_sk_new(ossl_check_X509_PURPOSE_compfunc_type(cmp)))
#define sk_X509_PURPOSE_new_null() ((STACK_OF(X509_PURPOSE) *)OPENSSL_sk_new_null())
#define sk_X509_PURPOSE_new_reserve(cmp, n) ((STACK_OF(X509_PURPOSE)
*)OPENSSL_sk_new_reserve(ossl_check_X509_PURPOSE_compfunc_type(cmp), (n)))
#define sk_X509_PURPOSE_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_X509_PURPOSE_sk_type(sk), (n))
#define sk_X509_PURPOSE_free(sk) OPENSSL_sk_free(ossl_check_X509_PURPOSE_sk_type(sk))
#define sk_X509_PURPOSE_zero(sk) OPENSSL_sk_zero(ossl_check_X509_PURPOSE_sk_type(sk))
#define sk_X509_PURPOSE_delete(sk, i) ((X509_PURPOSE
*)OPENSSL_sk_delete(ossl_check_X509_PURPOSE_sk_type(sk), (i)))
#define sk_X509_PURPOSE_delete_ptr(sk, ptr) ((X509_PURPOSE
*)OPENSSL_sk_delete_ptr(ossl_check_X509_PURPOSE_sk_type(sk),
 ossl_check_X509_PURPOSE_type(ptr)))
#define sk_X509_PURPOSE_push(sk, ptr) OPENSSL_sk_push(ossl_check_X509_PURPOSE_sk_type(sk),
ossl_check_X509_PURPOSE_type(ptr))
#define sk_X509_PURPOSE_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_X509_PURPOSE_sk_type(sk),
ossl_check_X509_PURPOSE_type(ptr))
#define sk_X509_PURPOSE_pop(sk) ((X509_PURPOSE
*)OPENSSL_sk_pop(ossl_check_X509_PURPOSE_sk_type(sk)))
#define sk_X509_PURPOSE_shift(sk) ((X509_PURPOSE
*)OPENSSL_sk_shift(ossl_check_X509_PURPOSE_sk_type(sk)))
#define sk_X509_PURPOSE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_PURPOSE_sk_type(sk),ossl_check_X509_PURPOSE_freefunc_type(fr
eefunc))
#define sk_X509_PURPOSE_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_X509_PURPOSE_sk_type(sk),
ossl_check_X509_PURPOSE_type(ptr), (idx))
#define sk_X509_PURPOSE_set(sk, idx, ptr) ((X509_PURPOSE
*)OPENSSL_sk_set(ossl_check_X509_PURPOSE_sk_type(sk), (idx), ossl_check_X509_PURPOSE_type(ptr)))
#define sk_X509_PURPOSE_find(sk, ptr) OPENSSL_sk_find(ossl_check_X509_PURPOSE_sk_type(sk),
 ossl_check_X509_PURPOSE_type(ptr))
#define sk_X509_PURPOSE_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_X509_PURPOSE_sk_type(sk),
ossl_check_X509_PURPOSE_type(ptr))
#define sk_X509_PURPOSE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_PURPOSE_sk_type(sk), ossl_check_X509_PURPOSE_type(ptr), pnum)
```

```
#define sk_X509_PURPOSE_sort(sk) OPENSSL_sk_sort(ossl_check_X509_PURPOSE_sk_type(sk))
#define sk_X509_PURPOSE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509_PURPOSE_sk_type(sk))
#define sk_X509_PURPOSE_dup(sk) ((STACK_OF(X509_PURPOSE)
*)OPENSSL_sk_dup(ossl_check_const_X509_PURPOSE_sk_type(sk)))
#define sk_X509_PURPOSE_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_PURPOSE)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_PURPOSE_sk_type(sk),
ossl_check_X509_PURPOSE_copyfunc_type(copyfunc), ossl_check_X509_PURPOSE_freefunc_type(freefunc)))
#define sk_X509_PURPOSE_set_cmp_func(sk, cmp)
((sk_X509_PURPOSE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_PURPOSE_sk_type(sk),
 ossl_check_X509_PURPOSE_compfunc_type(cmp)))



# define X509_PURPOSE_SSL_CLIENT        1
# define X509_PURPOSE_SSL_SERVER        2
# define X509_PURPOSE_NS_SSL_SERVER     3
# define X509_PURPOSE_SMIME_SIGN        4
# define X509_PURPOSE_SMIME_ENCRYPT     5
# define X509_PURPOSE_CRL_SIGN          6
# define X509_PURPOSE_ANY               7
# define X509_PURPOSE_OCSP_HELPER       8
# define X509_PURPOSE_TIMESTAMP_SIGN    9

# define X509_PURPOSE_MIN               1
# define X509_PURPOSE_MAX               9

/* Flags for X509V3_EXT_print() */

# define X509V3_EXT_UNKNOWN_MASK        (0xfL << 16)
/* Return error for unknown extensions */
# define X509V3_EXT_DEFAULT             0
/* Print error for unknown extensions */
# define X509V3_EXT_ERROR_UNKNOWN       (1L << 16)
/* ASN1 parse unknown extensions */
# define X509V3_EXT_PARSE_UNKNOWN       (2L << 16)
/* BIO_dump unknown extensions */
# define X509V3_EXT_DUMP_UNKNOWN
       (3L << 16)

/* Flags for X509V3_add1_i2d */

# define X509V3_ADD_OP_MASK             0xfL
# define X509V3_ADD_DEFAULT             0L
# define X509V3_ADD_APPEND              1L
# define X509V3_ADD_REPLACE             2L
# define X509V3_ADD_REPLACE_EXISTING    3L
# define X509V3_ADD_KEEP_EXISTING       4L
```

```
# define X509V3_ADD_DELETE            5L
# define X509V3_ADD_SILENT            0x10

DECLARE_ASN1_FUNCTIONS(BASIC_CONSTRAINTS)

DECLARE_ASN1_FUNCTIONS(SXNET)
DECLARE_ASN1_FUNCTIONS(SXNETID)

DECLARE_ASN1_FUNCTIONS(ISSUER_SIGN_TOOL)

int SXNET_add_id_asc(SXNET **psx, const char *zone, const char *user, int userlen);
int SXNET_add_id_ulong(SXNET **psx, unsigned long lzone, const char *user,
                       int userlen);
int SXNET_add_id_INTEGER(SXNET **psx, ASN1_INTEGER *izone, const char *user,
                         int userlen);

ASN1_OCTET_STRING *SXNET_get_id_asc(SXNET *sx, const char *zone);
ASN1_OCTET_STRING *SXNET_get_id_ulong(SXNET *sx, unsigned long lzone);
ASN1_OCTET_STRING
 *SXNET_get_id_INTEGER(SXNET *sx, ASN1_INTEGER *zone);

DECLARE_ASN1_FUNCTIONS(AUTHORITY_KEYID)

DECLARE_ASN1_FUNCTIONS(PKEY_USAGE_PERIOD)

DECLARE_ASN1_FUNCTIONS(GENERAL_NAME)
DECLARE_ASN1_DUP_FUNCTION(GENERAL_NAME)
int GENERAL_NAME_cmp(GENERAL_NAME *a, GENERAL_NAME *b);

ASN1_BIT_STRING *v2i_ASN1_BIT_STRING(X509V3_EXT_METHOD *method,
                                     X509V3_CTX *ctx,
                                     STACK_OF(CONF_VALUE) *nval);
STACK_OF(CONF_VALUE) *i2v_ASN1_BIT_STRING(X509V3_EXT_METHOD *method,
                                          ASN1_BIT_STRING *bits,
                                          STACK_OF(CONF_VALUE) *extlist);
char *i2s_ASN1_IA5STRING(X509V3_EXT_METHOD *method, ASN1_IA5STRING *ia5);
ASN1_IA5STRING *s2i_ASN1_IA5STRING(X509V3_EXT_METHOD *method,
                                   X509V3_CTX *ctx, const char *str);
char *i2s_ASN1_UTF8STRING(X509V3_EXT_METHOD *method, ASN1_UTF8STRING *utf8);
ASN1_UTF8STRING *s2i_ASN1_UTF8STRING(X509V3_EXT_METHOD
 *method,
                                     X509V3_CTX *ctx, const char *str);

STACK_OF(CONF_VALUE) *i2v_GENERAL_NAME(X509V3_EXT_METHOD *method,
                                       GENERAL_NAME *gen,
                                       STACK_OF(CONF_VALUE) *ret);
int GENERAL_NAME_print(BIO *out, GENERAL_NAME *gen);
```

```
DECLARE_ASN1_FUNCTIONS(GENERAL_NAMES)

STACK_OF(CONF_VALUE) *i2v_GENERAL_NAMES(X509V3_EXT_METHOD *method,
                                        GENERAL_NAMES *gen,
                                        STACK_OF(CONF_VALUE) *extlist);
GENERAL_NAMES *v2i_GENERAL_NAMES(const X509V3_EXT_METHOD *method,
                                 X509V3_CTX *ctx, STACK_OF(CONF_VALUE) *nval);

DECLARE_ASN1_FUNCTIONS(OTHERNAME)
DECLARE_ASN1_FUNCTIONS(EDIPARTYNAME)
int OTHERNAME_cmp(OTHERNAME *a, OTHERNAME *b);
void GENERAL_NAME_set0_value(GENERAL_NAME *a, int type, void *value);
void *GENERAL_NAME_get0_value(const GENERAL_NAME *a, int *ptype);
int GENERAL_NAME_set0_othername(GENERAL_NAME
 *gen,
                                ASN1_OBJECT *oid, ASN1_TYPE *value);
int GENERAL_NAME_get0_otherName(const GENERAL_NAME *gen,
                                ASN1_OBJECT **poid, ASN1_TYPE **pvalue);

char *i2s_ASN1_OCTET_STRING(X509V3_EXT_METHOD *method,
                            const ASN1_OCTET_STRING *ia5);
ASN1_OCTET_STRING *s2i_ASN1_OCTET_STRING(X509V3_EXT_METHOD *method,
                                         X509V3_CTX *ctx, const char *str);

DECLARE_ASN1_FUNCTIONS(EXTENDED_KEY_USAGE)
int i2a_ACCESS_DESCRIPTION(BIO *bp, const ACCESS_DESCRIPTION *a);

DECLARE_ASN1_ALLOC_FUNCTIONS(TLS_FEATURE)

DECLARE_ASN1_FUNCTIONS(CERTIFICATEPOLICIES)
DECLARE_ASN1_FUNCTIONS(POLICYINFO)
DECLARE_ASN1_FUNCTIONS(POLICYQUALINFO)
DECLARE_ASN1_FUNCTIONS(USERNOTICE)
DECLARE_ASN1_FUNCTIONS(NOTICEREF)

DECLARE_ASN1_FUNCTIONS(CRL_DIST_POINTS)
DECLARE_ASN1_FUNCTIONS(DIST_POINT)
DECLARE_ASN1_FUNCTIONS(DIST_POINT_NAME)
DECLARE_ASN1_FUNCTIONS(ISSUING_DIST_POINT)

int
 DIST_POINT_set_dpname(DIST_POINT_NAME *dpn, const X509_NAME *iname);

int NAME_CONSTRAINTS_check(X509 *x, NAME_CONSTRAINTS *nc);
int NAME_CONSTRAINTS_check_CN(X509 *x, NAME_CONSTRAINTS *nc);

DECLARE_ASN1_FUNCTIONS(ACCESS_DESCRIPTION)
DECLARE_ASN1_FUNCTIONS(AUTHORITY_INFO_ACCESS)
```

```
DECLARE_ASN1_ITEM(POLICY_MAPPING)
DECLARE_ASN1_ALLOC_FUNCTIONS(POLICY_MAPPING)
DECLARE_ASN1_ITEM(POLICY_MAPPINGS)

DECLARE_ASN1_ITEM(GENERAL_SUBTREE)
DECLARE_ASN1_ALLOC_FUNCTIONS(GENERAL_SUBTREE)

DECLARE_ASN1_ITEM(NAME_CONSTRAINTS)
DECLARE_ASN1_ALLOC_FUNCTIONS(NAME_CONSTRAINTS)

DECLARE_ASN1_ALLOC_FUNCTIONS(POLICY_CONSTRAINTS)
DECLARE_ASN1_ITEM(POLICY_CONSTRAINTS)

GENERAL_NAME *a2i_GENERAL_NAME(GENERAL_NAME *out,
                               const X509V3_EXT_METHOD *method,
                               X509V3_CTX *ctx, int gen_type,
                               const char *value, int is_nc);

# ifdef OPENSSL_CONF_H
GENERAL_NAME *v2i_GENERAL_NAME(const X509V3_EXT_METHOD *method,

                    X509V3_CTX *ctx, CONF_VALUE *cnf);
GENERAL_NAME *v2i_GENERAL_NAME_ex(GENERAL_NAME *out,
                                  const X509V3_EXT_METHOD *method,
                                  X509V3_CTX *ctx, CONF_VALUE *cnf,
                                  int is_nc);

void X509V3_conf_free(CONF_VALUE *val);

X509_EXTENSION *X509V3_EXT_nconf_nid(CONF *conf, X509V3_CTX *ctx, int ext_nid,
                                     const char *value);
X509_EXTENSION *X509V3_EXT_nconf(CONF *conf, X509V3_CTX *ctx, const char *name,
                                 const char *value);
int X509V3_EXT_add_nconf_sk(CONF *conf, X509V3_CTX *ctx, const char *section,
                            STACK_OF(X509_EXTENSION) **sk);
int X509V3_EXT_add_nconf(CONF *conf, X509V3_CTX *ctx, const char *section,
                         X509 *cert);
int X509V3_EXT_REQ_add_nconf(CONF *conf, X509V3_CTX *ctx, const char *section,
                             X509_REQ *req);
int X509V3_EXT_CRL_add_nconf(CONF
 *conf, X509V3_CTX *ctx, const char *section,
                             X509_CRL *crl);

X509_EXTENSION *X509V3_EXT_conf_nid(LHASH_OF(CONF_VALUE) *conf,
                                    X509V3_CTX *ctx, int ext_nid,
                                    const char *value);
X509_EXTENSION *X509V3_EXT_conf(LHASH_OF(CONF_VALUE) *conf, X509V3_CTX *ctx,
```

```
                        const char *name, const char *value);
int X509V3_EXT_add_conf(LHASH_OF(CONF_VALUE) *conf, X509V3_CTX *ctx,
                        const char *section, X509 *cert);
int X509V3_EXT_REQ_add_conf(LHASH_OF(CONF_VALUE) *conf, X509V3_CTX *ctx,
                        const char *section, X509_REQ *req);
int X509V3_EXT_CRL_add_conf(LHASH_OF(CONF_VALUE) *conf, X509V3_CTX *ctx,
                        const char *section, X509_CRL *crl);

int X509V3_add_value_bool_nf(const char *name, int asn1_bool,
                        STACK_OF(CONF_VALUE) **extlist);
int X509V3_get_value_bool(const CONF_VALUE *value,
 int *asn1_bool);
int X509V3_get_value_int(const CONF_VALUE *value, ASN1_INTEGER **aint);
void X509V3_set_nconf(X509V3_CTX *ctx, CONF *conf);
void X509V3_set_conf_lhash(X509V3_CTX *ctx, LHASH_OF(CONF_VALUE) *lhash);
# endif

char *X509V3_get_string(X509V3_CTX *ctx, const char *name, const char *section);
STACK_OF(CONF_VALUE) *X509V3_get_section(X509V3_CTX *ctx, const char *section);
void X509V3_string_free(X509V3_CTX *ctx, char *str);
void X509V3_section_free(X509V3_CTX *ctx, STACK_OF(CONF_VALUE) *section);
void X509V3_set_ctx(X509V3_CTX *ctx, X509 *issuer, X509 *subject,
                X509_REQ *req, X509_CRL *crl, int flags);
/* For API backward compatibility, this is separate from X509V3_set_ctx(): */
int X509V3_set_issuer_pkey(X509V3_CTX *ctx, EVP_PKEY *pkey);

int X509V3_add_value(const char *name, const char *value,
                STACK_OF(CONF_VALUE) **extlist);
int X509V3_add_value_uchar(const char *name, const unsigned char *value,
                        STACK_OF(CONF_VALUE)
 **extlist);
int X509V3_add_value_bool(const char *name, int asn1_bool,
                        STACK_OF(CONF_VALUE) **extlist);
int X509V3_add_value_int(const char *name, const ASN1_INTEGER *aint,
                        STACK_OF(CONF_VALUE) **extlist);
char *i2s_ASN1_INTEGER(X509V3_EXT_METHOD *meth, const ASN1_INTEGER *aint);
ASN1_INTEGER *s2i_ASN1_INTEGER(X509V3_EXT_METHOD *meth, const char *value);
char *i2s_ASN1_ENUMERATED(X509V3_EXT_METHOD *meth, const ASN1_ENUMERATED *aint);
char *i2s_ASN1_ENUMERATED_TABLE(X509V3_EXT_METHOD *meth,
                        const ASN1_ENUMERATED *aint);
int X509V3_EXT_add(X509V3_EXT_METHOD *ext);
int X509V3_EXT_add_list(X509V3_EXT_METHOD *extlist);
int X509V3_EXT_add_alias(int nid_to, int nid_from);
void X509V3_EXT_cleanup(void);

const X509V3_EXT_METHOD *X509V3_EXT_get(X509_EXTENSION *ext);
const X509V3_EXT_METHOD *X509V3_EXT_get_nid(int nid);
int X509V3_add_standard_extensions(void);
```

```
STACK_OF(CONF_VALUE) *X509V3_parse_list(const
 char *line);
void *X509V3_EXT_d2i(X509_EXTENSION *ext);
void *X509V3_get_d2i(const STACK_OF(X509_EXTENSION) *x, int nid, int *crit,
                     int *idx);

X509_EXTENSION *X509V3_EXT_i2d(int ext_nid, int crit, void *ext_struc);
int X509V3_add1_i2d(STACK_OF(X509_EXTENSION) **x, int nid, void *value,
                    int crit, unsigned long flags);

#ifndef OPENSSL_NO_DEPRECATED_1_1_0
/* The new declarations are in crypto.h, but the old ones were here. */
# define hex_to_string OPENSSL_buf2hexstr
# define string_to_hex OPENSSL_hexstr2buf
#endif

void X509V3_EXT_val_prn(BIO *out, STACK_OF(CONF_VALUE) *val, int indent,
                        int ml);
int X509V3_EXT_print(BIO *out, X509_EXTENSION *ext, unsigned long flag,
                     int indent);
#ifndef OPENSSL_NO_STDIO
int X509V3_EXT_print_fp(FILE *out, X509_EXTENSION *ext, int flag, int indent);
#endif
int X509V3_extensions_print(BIO *out, const char *title,
                            const STACK_OF(X509_EXTENSION)
 *exts,
                            unsigned long flag, int indent);

int X509_check_ca(X509 *x);
int X509_check_purpose(X509 *x, int id, int ca);
int X509_supported_extension(X509_EXTENSION *ex);
int X509_PURPOSE_set(int *p, int purpose);
int X509_check_issued(X509 *issuer, X509 *subject);
int X509_check_akid(const X509 *issuer, const AUTHORITY_KEYID *akid);
void X509_set_proxy_flag(X509 *x);
void X509_set_proxy_pathlen(X509 *x, long l);
long X509_get_proxy_pathlen(X509 *x);

uint32_t X509_get_extension_flags(X509 *x);
uint32_t X509_get_key_usage(X509 *x);
uint32_t X509_get_extended_key_usage(X509 *x);
const ASN1_OCTET_STRING *X509_get0_subject_key_id(X509 *x);
const ASN1_OCTET_STRING *X509_get0_authority_key_id(X509 *x);
const GENERAL_NAMES *X509_get0_authority_issuer(X509 *x);
const ASN1_INTEGER *X509_get0_authority_serial(X509 *x);

int X509_PURPOSE_get_count(void);
X509_PURPOSE *X509_PURPOSE_get0(int idx);
```

```
int X509_PURPOSE_get_by_sname(const char *sname);
int X509_PURPOSE_get_by_id(int
 id);
int X509_PURPOSE_add(int id, int trust, int flags,
                int (*ck) (const X509_PURPOSE *, const X509 *, int),
                const char *name, const char *sname, void *arg);
char *X509_PURPOSE_get0_name(const X509_PURPOSE *xp);
char *X509_PURPOSE_get0_sname(const X509_PURPOSE *xp);
int X509_PURPOSE_get_trust(const X509_PURPOSE *xp);
void X509_PURPOSE_cleanup(void);
int X509_PURPOSE_get_id(const X509_PURPOSE *);

STACK_OF(OPENSSL_STRING) *X509_get1_email(X509 *x);
STACK_OF(OPENSSL_STRING) *X509_REQ_get1_email(X509_REQ *x);
void X509_email_free(STACK_OF(OPENSSL_STRING) *sk);
STACK_OF(OPENSSL_STRING) *X509_get1_ocsp(X509 *x);
/* Flags for X509_check_* functions */

/*
* Always check subject name for host match even if subject alt names present
*/
# define X509_CHECK_FLAG_ALWAYS_CHECK_SUBJECT    0x1
/* Disable wildcard matching for dnsName fields and common name. */
# define X509_CHECK_FLAG_NO_WILDCARDS    0x2
/* Wildcards must not match a partial
 label. */
# define X509_CHECK_FLAG_NO_PARTIAL_WILDCARDS 0x4
/* Allow (non-partial) wildcards to match multiple labels. */
# define X509_CHECK_FLAG_MULTI_LABEL_WILDCARDS 0x8
/* Constraint verifier subdomain patterns to match a single labels. */
# define X509_CHECK_FLAG_SINGLE_LABEL_SUBDOMAINS 0x10
/* Never check the subject CN */
# define X509_CHECK_FLAG_NEVER_CHECK_SUBJECT    0x20
/*
* Match reference identifiers starting with "." to any sub-domain.
* This is a non-public flag, turned on implicitly when the subject
* reference identity is a DNS name.
*/
# define _X509_CHECK_FLAG_DOT_SUBDOMAINS 0x8000

int X509_check_host(X509 *x, const char *chk, size_t chklen,
                unsigned int flags, char **peername);
int X509_check_email(X509 *x, const char *chk, size_t chklen,
                 unsigned int flags);
int X509_check_ip(X509 *x, const unsigned char *chk, size_t chklen,
              unsigned int flags);
int X509_check_ip_asc(X509 *x, const char *ipasc, unsigned
```

```
 int flags);

ASN1_OCTET_STRING *a2i_IPADDRESS(const char *ipasc);
ASN1_OCTET_STRING *a2i_IPADDRESS_NC(const char *ipasc);
int X509V3_NAME_from_section(X509_NAME *nm, STACK_OF(CONF_VALUE) *dn_sk,
                             unsigned long chtype);

void X509_POLICY_NODE_print(BIO *out, X509_POLICY_NODE *node, int indent);
SKM_DEFINE_STACK_OF_INTERNAL(X509_POLICY_NODE, X509_POLICY_NODE,
X509_POLICY_NODE)
#define sk_X509_POLICY_NODE_num(sk)
OPENSSL_sk_num(ossl_check_const_X509_POLICY_NODE_sk_type(sk))
#define sk_X509_POLICY_NODE_value(sk, idx) ((X509_POLICY_NODE
*)OPENSSL_sk_value(ossl_check_const_X509_POLICY_NODE_sk_type(sk), (idx)))
#define sk_X509_POLICY_NODE_new(cmp) ((STACK_OF(X509_POLICY_NODE)
*)OPENSSL_sk_new(ossl_check_X509_POLICY_NODE_compfunc_type(cmp)))
#define sk_X509_POLICY_NODE_new_null() ((STACK_OF(X509_POLICY_NODE)
*)OPENSSL_sk_new_null())
#define sk_X509_POLICY_NODE_new_reserve(cmp, n) ((STACK_OF(X509_POLICY_NODE)
*)OPENSSL_sk_new_reserve(ossl_check_X509_POLICY_NODE_compfunc_type(cmp),
 (n)))
#define sk_X509_POLICY_NODE_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_X509_POLICY_NODE_sk_type(sk), (n))
#define sk_X509_POLICY_NODE_free(sk) OPENSSL_sk_free(ossl_check_X509_POLICY_NODE_sk_type(sk))
#define sk_X509_POLICY_NODE_zero(sk) OPENSSL_sk_zero(ossl_check_X509_POLICY_NODE_sk_type(sk))
#define sk_X509_POLICY_NODE_delete(sk, i) ((X509_POLICY_NODE
*)OPENSSL_sk_delete(ossl_check_X509_POLICY_NODE_sk_type(sk), (i)))
#define sk_X509_POLICY_NODE_delete_ptr(sk, ptr) ((X509_POLICY_NODE
*)OPENSSL_sk_delete_ptr(ossl_check_X509_POLICY_NODE_sk_type(sk),
ossl_check_X509_POLICY_NODE_type(ptr)))
#define sk_X509_POLICY_NODE_push(sk, ptr)
OPENSSL_sk_push(ossl_check_X509_POLICY_NODE_sk_type(sk),
ossl_check_X509_POLICY_NODE_type(ptr))
#define sk_X509_POLICY_NODE_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_X509_POLICY_NODE_sk_type(sk),
ossl_check_X509_POLICY_NODE_type(ptr))
#define sk_X509_POLICY_NODE_pop(sk) ((X509_POLICY_NODE
*)OPENSSL_sk_pop(ossl_check_X509_POLICY_NODE_sk_type(sk)))
#define
 sk_X509_POLICY_NODE_shift(sk) ((X509_POLICY_NODE
*)OPENSSL_sk_shift(ossl_check_X509_POLICY_NODE_sk_type(sk)))
#define sk_X509_POLICY_NODE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_X509_POLICY_NODE_sk_type(sk),ossl_check_X509_POLICY_NODE_free
func_type(freefunc))
#define sk_X509_POLICY_NODE_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_X509_POLICY_NODE_sk_type(sk),
ossl_check_X509_POLICY_NODE_type(ptr), (idx))
#define sk_X509_POLICY_NODE_set(sk, idx, ptr) ((X509_POLICY_NODE
```

```
*)OPENSSL_sk_set(ossl_check_X509_POLICY_NODE_sk_type(sk), (idx),
ossl_check_X509_POLICY_NODE_type(ptr)))
#define sk_X509_POLICY_NODE_find(sk, ptr)
OPENSSL_sk_find(ossl_check_X509_POLICY_NODE_sk_type(sk),
ossl_check_X509_POLICY_NODE_type(ptr))
#define sk_X509_POLICY_NODE_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_X509_POLICY_NODE_sk_type(sk),
ossl_check_X509_POLICY_NODE_type(ptr))
#define sk_X509_POLICY_NODE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_X509_POLICY_NODE_sk_type(sk),
 ossl_check_X509_POLICY_NODE_type(ptr), pnum)
#define sk_X509_POLICY_NODE_sort(sk) OPENSSL_sk_sort(ossl_check_X509_POLICY_NODE_sk_type(sk))
#define sk_X509_POLICY_NODE_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_X509_POLICY_NODE_sk_type(sk))
#define sk_X509_POLICY_NODE_dup(sk) ((STACK_OF(X509_POLICY_NODE)
*)OPENSSL_sk_dup(ossl_check_const_X509_POLICY_NODE_sk_type(sk)))
#define sk_X509_POLICY_NODE_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(X509_POLICY_NODE)
*)OPENSSL_sk_deep_copy(ossl_check_const_X509_POLICY_NODE_sk_type(sk),
ossl_check_X509_POLICY_NODE_copyfunc_type(copyfunc),
ossl_check_X509_POLICY_NODE_freefunc_type(freefunc)))
#define sk_X509_POLICY_NODE_set_cmp_func(sk, cmp)
((sk_X509_POLICY_NODE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_X509_POLICY_NODE_sk_type
(sk), ossl_check_X509_POLICY_NODE_compfunc_type(cmp)))



#ifndef OPENSSL_NO_RFC3779
typedef struct ASRange_st {
  ASN1_INTEGER *min, *max;
} ASRange;

# define ASIdOrRange_id         0
# define
 ASIdOrRange_range      1

typedef struct ASIdOrRange_st {
  int type;
  union {
     ASN1_INTEGER *id;
     ASRange *range;
  } u;
} ASIdOrRange;

SKM_DEFINE_STACK_OF_INTERNAL(ASIdOrRange, ASIdOrRange, ASIdOrRange)
#define sk_ASIdOrRange_num(sk) OPENSSL_sk_num(ossl_check_const_ASIdOrRange_sk_type(sk))
#define sk_ASIdOrRange_value(sk, idx) ((ASIdOrRange
*)OPENSSL_sk_value(ossl_check_const_ASIdOrRange_sk_type(sk), (idx)))
#define sk_ASIdOrRange_new(cmp) ((STACK_OF(ASIdOrRange)
```

*)OPENSSL_sk_new(ossl_check_ASIdOrRange_compfunc_type(cmp)))
#define sk_ASIdOrRange_new_null() ((STACK_OF(ASIdOrRange) *)OPENSSL_sk_new_null())
#define sk_ASIdOrRange_new_reserve(cmp, n) ((STACK_OF(ASIdOrRange)
*)OPENSSL_sk_new_reserve(ossl_check_ASIdOrRange_compfunc_type(cmp), (n)))
#define sk_ASIdOrRange_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ASIdOrRange_sk_type(sk), (n))
#define sk_ASIdOrRange_free(sk) OPENSSL_sk_free(ossl_check_ASIdOrRange_sk_type(sk))
#define sk_ASIdOrRange_zero(sk) OPENSSL_sk_zero(ossl_check_ASIdOrRange_sk_type(sk))
#define
sk_ASIdOrRange_delete(sk, i) ((ASIdOrRange *)OPENSSL_sk_delete(ossl_check_ASIdOrRange_sk_type(sk),
(i)))
#define sk_ASIdOrRange_delete_ptr(sk, ptr) ((ASIdOrRange
*)OPENSSL_sk_delete_ptr(ossl_check_ASIdOrRange_sk_type(sk), ossl_check_ASIdOrRange_type(ptr)))
#define sk_ASIdOrRange_push(sk, ptr) OPENSSL_sk_push(ossl_check_ASIdOrRange_sk_type(sk),
ossl_check_ASIdOrRange_type(ptr))
#define sk_ASIdOrRange_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_ASIdOrRange_sk_type(sk),
ossl_check_ASIdOrRange_type(ptr))
#define sk_ASIdOrRange_pop(sk) ((ASIdOrRange *)OPENSSL_sk_pop(ossl_check_ASIdOrRange_sk_type(sk)))
#define sk_ASIdOrRange_shift(sk) ((ASIdOrRange *)OPENSSL_sk_shift(ossl_check_ASIdOrRange_sk_type(sk)))
#define sk_ASIdOrRange_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ASIdOrRange_sk_type(sk),ossl_check_ASIdOrRange_freefunc_type(freefunc)
)
#define sk_ASIdOrRange_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_ASIdOrRange_sk_type(sk),
ossl_check_ASIdOrRange_type(ptr), (idx))
#define sk_ASIdOrRange_set(sk, idx, ptr) ((ASIdOrRange
*)OPENSSL_sk_set(ossl_check_ASIdOrRange_sk_type(sk), (idx), ossl_check_ASIdOrRange_type(ptr)))
#define sk_ASIdOrRange_find(sk, ptr) OPENSSL_sk_find(ossl_check_ASIdOrRange_sk_type(sk),
ossl_check_ASIdOrRange_type(ptr))
#define sk_ASIdOrRange_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_ASIdOrRange_sk_type(sk),
ossl_check_ASIdOrRange_type(ptr))
#define sk_ASIdOrRange_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_ASIdOrRange_sk_type(sk),
ossl_check_ASIdOrRange_type(ptr), pnum)
#define sk_ASIdOrRange_sort(sk) OPENSSL_sk_sort(ossl_check_ASIdOrRange_sk_type(sk))
#define sk_ASIdOrRange_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_ASIdOrRange_sk_type(sk))
#define sk_ASIdOrRange_dup(sk) ((STACK_OF(ASIdOrRange)
*)OPENSSL_sk_dup(ossl_check_const_ASIdOrRange_sk_type(sk)))
#define sk_ASIdOrRange_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ASIdOrRange)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASIdOrRange_sk_type(sk),
ossl_check_ASIdOrRange_copyfunc_type(copyfunc), ossl_check_ASIdOrRange_freefunc_type(freefunc)))
#define sk_ASIdOrRange_set_cmp_func(sk, cmp)
((sk_ASIdOrRange_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASIdOrRange_sk_type(sk),
ossl_check_ASIdOrRange_compfunc_type(cmp)))

typedef STACK_OF(ASIdOrRange) ASIdOrRanges;

define ASIdentifierChoice_inherit 0
define ASIdentifierChoice_asIdsOrRanges 1

```
typedef struct ASIdentifierChoice_st {
  int type;
  union {
     ASN1_NULL *inherit;
     ASIdOrRanges *asIdsOrRanges;
  } u;
} ASIdentifierChoice;

typedef struct ASIdentifiers_st {
  ASIdentifierChoice *asnum, *rdi;
} ASIdentifiers;

DECLARE_ASN1_FUNCTIONS(ASRange)
DECLARE_ASN1_FUNCTIONS(ASIdOrRange)
DECLARE_ASN1_FUNCTIONS(ASIdentifierChoice)
DECLARE_ASN1_FUNCTIONS(ASIdentifiers)

typedef struct IPAddressRange_st {
  ASN1_BIT_STRING *min, *max;
} IPAddressRange;

# define IPAddressOrRange_addressPrefix  0
# define
 IPAddressOrRange_addressRange   1

typedef struct IPAddressOrRange_st {
  int type;
  union {
     ASN1_BIT_STRING *addressPrefix;
     IPAddressRange *addressRange;
  } u;
} IPAddressOrRange;

SKM_DEFINE_STACK_OF_INTERNAL(IPAddressOrRange, IPAddressOrRange, IPAddressOrRange)
#define sk_IPAddressOrRange_num(sk) OPENSSL_sk_num(ossl_check_const_IPAddressOrRange_sk_type(sk))
#define sk_IPAddressOrRange_value(sk, idx) ((IPAddressOrRange
*)OPENSSL_sk_value(ossl_check_const_IPAddressOrRange_sk_type(sk), (idx)))
#define sk_IPAddressOrRange_new(cmp) ((STACK_OF(IPAddressOrRange)
*)OPENSSL_sk_new(ossl_check_IPAddressOrRange_compfunc_type(cmp)))
#define sk_IPAddressOrRange_new_null() ((STACK_OF(IPAddressOrRange) *)OPENSSL_sk_new_null())
#define sk_IPAddressOrRange_new_reserve(cmp, n) ((STACK_OF(IPAddressOrRange)
*)OPENSSL_sk_new_reserve(ossl_check_IPAddressOrRange_compfunc_type(cmp), (n)))
#define sk_IPAddressOrRange_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_IPAddressOrRange_sk_type(sk),
 (n))
#define sk_IPAddressOrRange_free(sk) OPENSSL_sk_free(ossl_check_IPAddressOrRange_sk_type(sk))
#define sk_IPAddressOrRange_zero(sk) OPENSSL_sk_zero(ossl_check_IPAddressOrRange_sk_type(sk))
#define sk_IPAddressOrRange_delete(sk, i) ((IPAddressOrRange
*)OPENSSL_sk_delete(ossl_check_IPAddressOrRange_sk_type(sk), (i)))
```

```
#define sk_IPAddressOrRange_delete_ptr(sk, ptr) ((IPAddressOrRange
*)OPENSSL_sk_delete_ptr(ossl_check_IPAddressOrRange_sk_type(sk),
ossl_check_IPAddressOrRange_type(ptr)))
#define sk_IPAddressOrRange_push(sk, ptr) OPENSSL_sk_push(ossl_check_IPAddressOrRange_sk_type(sk),
ossl_check_IPAddressOrRange_type(ptr))
#define sk_IPAddressOrRange_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_IPAddressOrRange_sk_type(sk),
ossl_check_IPAddressOrRange_type(ptr))
#define sk_IPAddressOrRange_pop(sk) ((IPAddressOrRange
*)OPENSSL_sk_pop(ossl_check_IPAddressOrRange_sk_type(sk)))
#define sk_IPAddressOrRange_shift(sk) ((IPAddressOrRange
*)OPENSSL_sk_shift(ossl_check_IPAddressOrRange_sk_type(sk)))
#define
 sk_IPAddressOrRange_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_IPAddressOrRange_sk_type(sk),ossl_check_IPAddressOrRange_freefunc_typ
e(freefunc))
#define sk_IPAddressOrRange_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_IPAddressOrRange_sk_type(sk), ossl_check_IPAddressOrRange_type(ptr), (idx))
#define sk_IPAddressOrRange_set(sk, idx, ptr) ((IPAddressOrRange
*)OPENSSL_sk_set(ossl_check_IPAddressOrRange_sk_type(sk), (idx), ossl_check_IPAddressOrRange_type(ptr)))
#define sk_IPAddressOrRange_find(sk, ptr) OPENSSL_sk_find(ossl_check_IPAddressOrRange_sk_type(sk),
ossl_check_IPAddressOrRange_type(ptr))
#define sk_IPAddressOrRange_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_IPAddressOrRange_sk_type(sk), ossl_check_IPAddressOrRange_type(ptr))
#define sk_IPAddressOrRange_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_IPAddressOrRange_sk_type(sk), ossl_check_IPAddressOrRange_type(ptr),
pnum)
#define sk_IPAddressOrRange_sort(sk) OPENSSL_sk_sort(ossl_check_IPAddressOrRange_sk_type(sk))
#define
 sk_IPAddressOrRange_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_IPAddressOrRange_sk_type(sk))
#define sk_IPAddressOrRange_dup(sk) ((STACK_OF(IPAddressOrRange)
*)OPENSSL_sk_dup(ossl_check_const_IPAddressOrRange_sk_type(sk)))
#define sk_IPAddressOrRange_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(IPAddressOrRange)
*)OPENSSL_sk_deep_copy(ossl_check_const_IPAddressOrRange_sk_type(sk),
ossl_check_IPAddressOrRange_copyfunc_type(copyfunc),
ossl_check_IPAddressOrRange_freefunc_type(freefunc)))
#define sk_IPAddressOrRange_set_cmp_func(sk, cmp)
((sk_IPAddressOrRange_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_IPAddressOrRange_sk_type(sk),
ossl_check_IPAddressOrRange_compfunc_type(cmp)))


typedef STACK_OF(IPAddressOrRange) IPAddressOrRanges;

# define IPAddressChoice_inherit              0
# define IPAddressChoice_addressesOrRanges    1

typedef struct IPAddressChoice_st {
  int type;
  union {
```

```
      ASN1_NULL *inherit;

    IPAddressOrRanges *addressesOrRanges;
   } u;
} IPAddressChoice;

typedef struct IPAddressFamily_st {
   ASN1_OCTET_STRING *addressFamily;
   IPAddressChoice *ipAddressChoice;
} IPAddressFamily;

SKM_DEFINE_STACK_OF_INTERNAL(IPAddressFamily, IPAddressFamily, IPAddressFamily)
#define sk_IPAddressFamily_num(sk) OPENSSL_sk_num(ossl_check_const_IPAddressFamily_sk_type(sk))
#define sk_IPAddressFamily_value(sk, idx) ((IPAddressFamily
*)OPENSSL_sk_value(ossl_check_const_IPAddressFamily_sk_type(sk), (idx)))
#define sk_IPAddressFamily_new(cmp) ((STACK_OF(IPAddressFamily)
*)OPENSSL_sk_new(ossl_check_IPAddressFamily_compfunc_type(cmp)))
#define sk_IPAddressFamily_new_null() ((STACK_OF(IPAddressFamily) *)OPENSSL_sk_new_null())
#define sk_IPAddressFamily_new_reserve(cmp, n) ((STACK_OF(IPAddressFamily)
*)OPENSSL_sk_new_reserve(ossl_check_IPAddressFamily_compfunc_type(cmp), (n)))
#define sk_IPAddressFamily_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_IPAddressFamily_sk_type(sk), (n))
#define sk_IPAddressFamily_free(sk)
 OPENSSL_sk_free(ossl_check_IPAddressFamily_sk_type(sk))
#define sk_IPAddressFamily_zero(sk) OPENSSL_sk_zero(ossl_check_IPAddressFamily_sk_type(sk))
#define sk_IPAddressFamily_delete(sk, i) ((IPAddressFamily
*)OPENSSL_sk_delete(ossl_check_IPAddressFamily_sk_type(sk), (i)))
#define sk_IPAddressFamily_delete_ptr(sk, ptr) ((IPAddressFamily
*)OPENSSL_sk_delete_ptr(ossl_check_IPAddressFamily_sk_type(sk), ossl_check_IPAddressFamily_type(ptr)))
#define sk_IPAddressFamily_push(sk, ptr) OPENSSL_sk_push(ossl_check_IPAddressFamily_sk_type(sk),
ossl_check_IPAddressFamily_type(ptr))
#define sk_IPAddressFamily_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_IPAddressFamily_sk_type(sk),
ossl_check_IPAddressFamily_type(ptr))
#define sk_IPAddressFamily_pop(sk) ((IPAddressFamily
*)OPENSSL_sk_pop(ossl_check_IPAddressFamily_sk_type(sk)))
#define sk_IPAddressFamily_shift(sk) ((IPAddressFamily
*)OPENSSL_sk_shift(ossl_check_IPAddressFamily_sk_type(sk)))
#define sk_IPAddressFamily_pop_free(sk,
 freefunc)
OPENSSL_sk_pop_free(ossl_check_IPAddressFamily_sk_type(sk),ossl_check_IPAddressFamily_freefunc_type(fre
efunc))
#define sk_IPAddressFamily_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_IPAddressFamily_sk_type(sk),
ossl_check_IPAddressFamily_type(ptr), (idx))
#define sk_IPAddressFamily_set(sk, idx, ptr) ((IPAddressFamily
*)OPENSSL_sk_set(ossl_check_IPAddressFamily_sk_type(sk), (idx), ossl_check_IPAddressFamily_type(ptr)))
#define sk_IPAddressFamily_find(sk, ptr) OPENSSL_sk_find(ossl_check_IPAddressFamily_sk_type(sk),
ossl_check_IPAddressFamily_type(ptr))
#define sk_IPAddressFamily_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_IPAddressFamily_sk_type(sk),
ossl_check_IPAddressFamily_type(ptr))
```

```
#define sk_IPAddressFamily_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_IPAddressFamily_sk_type(sk), ossl_check_IPAddressFamily_type(ptr), pnum)
#define sk_IPAddressFamily_sort(sk) OPENSSL_sk_sort(ossl_check_IPAddressFamily_sk_type(sk))
#define sk_IPAddressFamily_is_sorted(sk)
 OPENSSL_sk_is_sorted(ossl_check_const_IPAddressFamily_sk_type(sk))
#define sk_IPAddressFamily_dup(sk) ((STACK_OF(IPAddressFamily)
*)OPENSSL_sk_dup(ossl_check_const_IPAddressFamily_sk_type(sk)))
#define sk_IPAddressFamily_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(IPAddressFamily)
*)OPENSSL_sk_deep_copy(ossl_check_const_IPAddressFamily_sk_type(sk),
ossl_check_IPAddressFamily_copyfunc_type(copyfunc), ossl_check_IPAddressFamily_freefunc_type(freefunc)))
#define sk_IPAddressFamily_set_cmp_func(sk, cmp)
((sk_IPAddressFamily_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_IPAddressFamily_sk_type(sk),
ossl_check_IPAddressFamily_compfunc_type(cmp)))



typedef STACK_OF(IPAddressFamily) IPAddrBlocks;

DECLARE_ASN1_FUNCTIONS(IPAddressRange)
DECLARE_ASN1_FUNCTIONS(IPAddressOrRange)
DECLARE_ASN1_FUNCTIONS(IPAddressChoice)
DECLARE_ASN1_FUNCTIONS(IPAddressFamily)

/*
* API tag for elements of the ASIdentifer SEQUENCE.
*/
# define V3_ASID_ASNUM   0
# define V3_ASID_RDI     1

/*
* AFI values,
 assigned by IANA.  It'd be nice to make the AFI
* handling code totally generic, but there are too many little things
* that would need to be defined for other address families for it to
* be worth the trouble.
*/
# define IANA_AFI_IPV4   1
# define IANA_AFI_IPV6   2

/*
* Utilities to construct and extract values from RFC3779 extensions,
* since some of the encodings (particularly for IP address prefixes
* and ranges) are a bit tedious to work with directly.
*/
int X509v3_asid_add_inherit(ASIdentifiers *asid, int which);
int X509v3_asid_add_id_or_range(ASIdentifiers *asid, int which,
                                ASN1_INTEGER *min, ASN1_INTEGER *max);
int X509v3_addr_add_inherit(IPAddrBlocks *addr,
```

```
                        const unsigned afi, const unsigned *safi);
int X509v3_addr_add_prefix(IPAddrBlocks *addr,
                       const unsigned afi, const unsigned *safi,
                       unsigned char *a, const int prefixlen);
int X509v3_addr_add_range(IPAddrBlocks
 *addr,
                       const unsigned afi, const unsigned *safi,
                       unsigned char *min, unsigned char *max);
unsigned X509v3_addr_get_afi(const IPAddressFamily *f);
int X509v3_addr_get_range(IPAddressOrRange *aor, const unsigned afi,
                       unsigned char *min, unsigned char *max,
                       const int length);

/*
* Canonical forms.
*/
int X509v3_asid_is_canonical(ASIdentifiers *asid);
int X509v3_addr_is_canonical(IPAddrBlocks *addr);
int X509v3_asid_canonize(ASIdentifiers *asid);
int X509v3_addr_canonize(IPAddrBlocks *addr);

/*
* Tests for inheritance and containment.
*/
int X509v3_asid_inherits(ASIdentifiers *asid);
int X509v3_addr_inherits(IPAddrBlocks *addr);
int X509v3_asid_subset(ASIdentifiers *a, ASIdentifiers *b);
int X509v3_addr_subset(IPAddrBlocks *a, IPAddrBlocks *b);

/*
* Check whether RFC 3779 extensions nest properly in chains.
*/
int X509v3_asid_validate_path(X509_STORE_CTX *);
int
 X509v3_addr_validate_path(X509_STORE_CTX *);
int X509v3_asid_validate_resource_set(STACK_OF(X509) *chain,
                              ASIdentifiers *ext,
                              int allow_inheritance);
int X509v3_addr_validate_resource_set(STACK_OF(X509) *chain,
                              IPAddrBlocks *ext, int allow_inheritance);

#endif                      /* OPENSSL_NO_RFC3779 */

SKM_DEFINE_STACK_OF_INTERNAL(ASN1_STRING, ASN1_STRING, ASN1_STRING)
#define sk_ASN1_STRING_num(sk) OPENSSL_sk_num(ossl_check_const_ASN1_STRING_sk_type(sk))
#define sk_ASN1_STRING_value(sk, idx) ((ASN1_STRING
*)OPENSSL_sk_value(ossl_check_const_ASN1_STRING_sk_type(sk), (idx)))
#define sk_ASN1_STRING_new(cmp) ((STACK_OF(ASN1_STRING)
```

*)OPENSSL_sk_new(ossl_check_ASN1_STRING_compfunc_type(cmp)))
#define sk_ASN1_STRING_new_null() ((STACK_OF(ASN1_STRING) *)OPENSSL_sk_new_null())
#define sk_ASN1_STRING_new_reserve(cmp, n) ((STACK_OF(ASN1_STRING)
*)OPENSSL_sk_new_reserve(ossl_check_ASN1_STRING_compfunc_type(cmp),
(n)))
#define sk_ASN1_STRING_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ASN1_STRING_sk_type(sk), (n))
#define sk_ASN1_STRING_free(sk) OPENSSL_sk_free(ossl_check_ASN1_STRING_sk_type(sk))
#define sk_ASN1_STRING_zero(sk) OPENSSL_sk_zero(ossl_check_ASN1_STRING_sk_type(sk))
#define sk_ASN1_STRING_delete(sk, i) ((ASN1_STRING
*)OPENSSL_sk_delete(ossl_check_ASN1_STRING_sk_type(sk), (i)))
#define sk_ASN1_STRING_delete_ptr(sk, ptr) ((ASN1_STRING
*)OPENSSL_sk_delete_ptr(ossl_check_ASN1_STRING_sk_type(sk), ossl_check_ASN1_STRING_type(ptr)))
#define sk_ASN1_STRING_push(sk, ptr) OPENSSL_sk_push(ossl_check_ASN1_STRING_sk_type(sk),
ossl_check_ASN1_STRING_type(ptr))
#define sk_ASN1_STRING_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_ASN1_STRING_sk_type(sk),
ossl_check_ASN1_STRING_type(ptr))
#define sk_ASN1_STRING_pop(sk) ((ASN1_STRING
*)OPENSSL_sk_pop(ossl_check_ASN1_STRING_sk_type(sk)))
#define sk_ASN1_STRING_shift(sk) ((ASN1_STRING
*)OPENSSL_sk_shift(ossl_check_ASN1_STRING_sk_type(sk)))
#define
sk_ASN1_STRING_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ASN1_STRING_sk_type(sk),ossl_check_ASN1_STRING_freefunc_type(freef
unc))
#define sk_ASN1_STRING_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_ASN1_STRING_sk_type(sk),
ossl_check_ASN1_STRING_type(ptr), (idx))
#define sk_ASN1_STRING_set(sk, idx, ptr) ((ASN1_STRING
*)OPENSSL_sk_set(ossl_check_ASN1_STRING_sk_type(sk), (idx), ossl_check_ASN1_STRING_type(ptr)))
#define sk_ASN1_STRING_find(sk, ptr) OPENSSL_sk_find(ossl_check_ASN1_STRING_sk_type(sk),
ossl_check_ASN1_STRING_type(ptr))
#define sk_ASN1_STRING_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_ASN1_STRING_sk_type(sk),
ossl_check_ASN1_STRING_type(ptr))
#define sk_ASN1_STRING_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ASN1_STRING_sk_type(sk), ossl_check_ASN1_STRING_type(ptr), pnum)
#define sk_ASN1_STRING_sort(sk) OPENSSL_sk_sort(ossl_check_ASN1_STRING_sk_type(sk))
#define sk_ASN1_STRING_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_ASN1_STRING_sk_type(sk))
#define
sk_ASN1_STRING_dup(sk) ((STACK_OF(ASN1_STRING)
*)OPENSSL_sk_dup(ossl_check_const_ASN1_STRING_sk_type(sk)))
#define sk_ASN1_STRING_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ASN1_STRING)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASN1_STRING_sk_type(sk),
ossl_check_ASN1_STRING_copyfunc_type(copyfunc), ossl_check_ASN1_STRING_freefunc_type(freefunc)))
#define sk_ASN1_STRING_set_cmp_func(sk, cmp)
((sk_ASN1_STRING_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASN1_STRING_sk_type(sk),
ossl_check_ASN1_STRING_compfunc_type(cmp)))

```
/*
* Admission Syntax
*/
typedef struct NamingAuthority_st NAMING_AUTHORITY;
typedef struct ProfessionInfo_st PROFESSION_INFO;
typedef struct Admissions_st ADMISSIONS;
typedef struct AdmissionSyntax_st ADMISSION_SYNTAX;
DECLARE_ASN1_FUNCTIONS(NAMING_AUTHORITY)
DECLARE_ASN1_FUNCTIONS(PROFESSION_INFO)
DECLARE_ASN1_FUNCTIONS(ADMISSIONS)
DECLARE_ASN1_FUNCTIONS(ADMISSION_SYNTAX)
SKM_DEFINE_STACK_OF_INTERNAL(PROFESSION_INFO,
 PROFESSION_INFO, PROFESSION_INFO)
#define sk_PROFESSION_INFO_num(sk)
OPENSSL_sk_num(ossl_check_const_PROFESSION_INFO_sk_type(sk))
#define sk_PROFESSION_INFO_value(sk, idx) ((PROFESSION_INFO
*)OPENSSL_sk_value(ossl_check_const_PROFESSION_INFO_sk_type(sk), (idx)))
#define sk_PROFESSION_INFO_new(cmp) ((STACK_OF(PROFESSION_INFO)
*)OPENSSL_sk_new(ossl_check_PROFESSION_INFO_compfunc_type(cmp)))
#define sk_PROFESSION_INFO_new_null() ((STACK_OF(PROFESSION_INFO) *)OPENSSL_sk_new_null())
#define sk_PROFESSION_INFO_new_reserve(cmp, n) ((STACK_OF(PROFESSION_INFO)
*)OPENSSL_sk_new_reserve(ossl_check_PROFESSION_INFO_compfunc_type(cmp), (n)))
#define sk_PROFESSION_INFO_reserve(sk, n)
OPENSSL_sk_reserve(ossl_check_PROFESSION_INFO_sk_type(sk), (n))
#define sk_PROFESSION_INFO_free(sk) OPENSSL_sk_free(ossl_check_PROFESSION_INFO_sk_type(sk))
#define sk_PROFESSION_INFO_zero(sk) OPENSSL_sk_zero(ossl_check_PROFESSION_INFO_sk_type(sk))
#define sk_PROFESSION_INFO_delete(sk, i) ((PROFESSION_INFO
*)OPENSSL_sk_delete(ossl_check_PROFESSION_INFO_sk_type(sk),
 (i)))
#define sk_PROFESSION_INFO_delete_ptr(sk, ptr) ((PROFESSION_INFO
*)OPENSSL_sk_delete_ptr(ossl_check_PROFESSION_INFO_sk_type(sk),
ossl_check_PROFESSION_INFO_type(ptr)))
#define sk_PROFESSION_INFO_push(sk, ptr)
OPENSSL_sk_push(ossl_check_PROFESSION_INFO_sk_type(sk), ossl_check_PROFESSION_INFO_type(ptr))
#define sk_PROFESSION_INFO_unshift(sk, ptr)
OPENSSL_sk_unshift(ossl_check_PROFESSION_INFO_sk_type(sk), ossl_check_PROFESSION_INFO_type(ptr))
#define sk_PROFESSION_INFO_pop(sk) ((PROFESSION_INFO
*)OPENSSL_sk_pop(ossl_check_PROFESSION_INFO_sk_type(sk)))
#define sk_PROFESSION_INFO_shift(sk) ((PROFESSION_INFO
*)OPENSSL_sk_shift(ossl_check_PROFESSION_INFO_sk_type(sk)))
#define sk_PROFESSION_INFO_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_PROFESSION_INFO_sk_type(sk),ossl_check_PROFESSION_INFO_freefun
c_type(freefunc))
#define sk_PROFESSION_INFO_insert(sk, ptr, idx)
OPENSSL_sk_insert(ossl_check_PROFESSION_INFO_sk_type(sk), ossl_check_PROFESSION_INFO_type(ptr),
 (idx))
#define sk_PROFESSION_INFO_set(sk, idx, ptr) ((PROFESSION_INFO
*)OPENSSL_sk_set(ossl_check_PROFESSION_INFO_sk_type(sk), (idx),
```

ossl_check_PROFESSION_INFO_type(ptr)))
#define sk_PROFESSION_INFO_find(sk, ptr) OPENSSL_sk_find(ossl_check_PROFESSION_INFO_sk_type(sk),
ossl_check_PROFESSION_INFO_type(ptr))
#define sk_PROFESSION_INFO_find_ex(sk, ptr)
OPENSSL_sk_find_ex(ossl_check_PROFESSION_INFO_sk_type(sk),
ossl_check_PROFESSION_INFO_type(ptr))
#define sk_PROFESSION_INFO_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_PROFESSION_INFO_sk_type(sk),
ossl_check_PROFESSION_INFO_type(ptr), pnum)
#define sk_PROFESSION_INFO_sort(sk) OPENSSL_sk_sort(ossl_check_PROFESSION_INFO_sk_type(sk))
#define sk_PROFESSION_INFO_is_sorted(sk)
OPENSSL_sk_is_sorted(ossl_check_const_PROFESSION_INFO_sk_type(sk))
#define sk_PROFESSION_INFO_dup(sk) ((STACK_OF(PROFESSION_INFO)
*)OPENSSL_sk_dup(ossl_check_const_PROFESSION_INFO_sk_type(sk)))
#define sk_PROFESSION_INFO_deep_copy(sk,
copyfunc, freefunc) ((STACK_OF(PROFESSION_INFO)
*)OPENSSL_sk_deep_copy(ossl_check_const_PROFESSION_INFO_sk_type(sk),
ossl_check_PROFESSION_INFO_copyfunc_type(copyfunc),
ossl_check_PROFESSION_INFO_freefunc_type(freefunc)))
#define sk_PROFESSION_INFO_set_cmp_func(sk, cmp)
((sk_PROFESSION_INFO_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_PROFESSION_INFO_sk_type(sk)
, ossl_check_PROFESSION_INFO_compfunc_type(cmp)))
SKM_DEFINE_STACK_OF_INTERNAL(ADMISSIONS, ADMISSIONS, ADMISSIONS)
#define sk_ADMISSIONS_num(sk) OPENSSL_sk_num(ossl_check_const_ADMISSIONS_sk_type(sk))
#define sk_ADMISSIONS_value(sk, idx) ((ADMISSIONS
*)OPENSSL_sk_value(ossl_check_const_ADMISSIONS_sk_type(sk), (idx)))
#define sk_ADMISSIONS_new(cmp) ((STACK_OF(ADMISSIONS)
*)OPENSSL_sk_new(ossl_check_ADMISSIONS_compfunc_type(cmp)))
#define sk_ADMISSIONS_new_null() ((STACK_OF(ADMISSIONS) *)OPENSSL_sk_new_null())
#define sk_ADMISSIONS_new_reserve(cmp, n) ((STACK_OF(ADMISSIONS)
*)OPENSSL_sk_new_reserve(ossl_check_ADMISSIONS_compfunc_type(cmp),
(n)))
#define sk_ADMISSIONS_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ADMISSIONS_sk_type(sk), (n))
#define sk_ADMISSIONS_free(sk) OPENSSL_sk_free(ossl_check_ADMISSIONS_sk_type(sk))
#define sk_ADMISSIONS_zero(sk) OPENSSL_sk_zero(ossl_check_ADMISSIONS_sk_type(sk))
#define sk_ADMISSIONS_delete(sk, i) ((ADMISSIONS
*)OPENSSL_sk_delete(ossl_check_ADMISSIONS_sk_type(sk), (i)))
#define sk_ADMISSIONS_delete_ptr(sk, ptr) ((ADMISSIONS
*)OPENSSL_sk_delete_ptr(ossl_check_ADMISSIONS_sk_type(sk), ossl_check_ADMISSIONS_type(ptr)))
#define sk_ADMISSIONS_push(sk, ptr) OPENSSL_sk_push(ossl_check_ADMISSIONS_sk_type(sk),
ossl_check_ADMISSIONS_type(ptr))
#define sk_ADMISSIONS_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_ADMISSIONS_sk_type(sk),
ossl_check_ADMISSIONS_type(ptr))
#define sk_ADMISSIONS_pop(sk) ((ADMISSIONS
*)OPENSSL_sk_pop(ossl_check_ADMISSIONS_sk_type(sk)))
#define sk_ADMISSIONS_shift(sk) ((ADMISSIONS
*)OPENSSL_sk_shift(ossl_check_ADMISSIONS_sk_type(sk)))
#define sk_ADMISSIONS_pop_free(sk,

```
 freefunc)
OPENSSL_sk_pop_free(ossl_check_ADMISSIONS_sk_type(sk),ossl_check_ADMISSIONS_freefunc_type(freefun
c))
#define sk_ADMISSIONS_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_ADMISSIONS_sk_type(sk),
ossl_check_ADMISSIONS_type(ptr), (idx))
#define sk_ADMISSIONS_set(sk, idx, ptr) ((ADMISSIONS
*)OPENSSL_sk_set(ossl_check_ADMISSIONS_sk_type(sk), (idx), ossl_check_ADMISSIONS_type(ptr)))
#define sk_ADMISSIONS_find(sk, ptr) OPENSSL_sk_find(ossl_check_ADMISSIONS_sk_type(sk),
ossl_check_ADMISSIONS_type(ptr))
#define sk_ADMISSIONS_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_ADMISSIONS_sk_type(sk),
ossl_check_ADMISSIONS_type(ptr))
#define sk_ADMISSIONS_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_ADMISSIONS_sk_type(sk),
ossl_check_ADMISSIONS_type(ptr), pnum)
#define sk_ADMISSIONS_sort(sk) OPENSSL_sk_sort(ossl_check_ADMISSIONS_sk_type(sk))
#define sk_ADMISSIONS_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_ADMISSIONS_sk_type(sk))
#define sk_ADMISSIONS_dup(sk)
 ((STACK_OF(ADMISSIONS) *)OPENSSL_sk_dup(ossl_check_const_ADMISSIONS_sk_type(sk)))
#define sk_ADMISSIONS_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ADMISSIONS)
*)OPENSSL_sk_deep_copy(ossl_check_const_ADMISSIONS_sk_type(sk),
ossl_check_ADMISSIONS_copyfunc_type(copyfunc), ossl_check_ADMISSIONS_freefunc_type(freefunc)))
#define sk_ADMISSIONS_set_cmp_func(sk, cmp)
((sk_ADMISSIONS_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ADMISSIONS_sk_type(sk),
ossl_check_ADMISSIONS_compfunc_type(cmp)))

typedef STACK_OF(PROFESSION_INFO) PROFESSION_INFOS;

const ASN1_OBJECT *NAMING_AUTHORITY_get0_authorityId(
  const NAMING_AUTHORITY *n);
const ASN1_IA5STRING *NAMING_AUTHORITY_get0_authorityURL(
  const NAMING_AUTHORITY *n);
const ASN1_STRING *NAMING_AUTHORITY_get0_authorityText(
  const NAMING_AUTHORITY *n);
void NAMING_AUTHORITY_set0_authorityId(NAMING_AUTHORITY *n,
  ASN1_OBJECT* namingAuthorityId);
void NAMING_AUTHORITY_set0_authorityURL(NAMING_AUTHORITY *n,
  ASN1_IA5STRING* namingAuthorityUrl);
void
 NAMING_AUTHORITY_set0_authorityText(NAMING_AUTHORITY *n,
  ASN1_STRING* namingAuthorityText);

const GENERAL_NAME *ADMISSION_SYNTAX_get0_admissionAuthority(
  const ADMISSION_SYNTAX *as);
void ADMISSION_SYNTAX_set0_admissionAuthority(
  ADMISSION_SYNTAX *as, GENERAL_NAME *aa);
const STACK_OF(ADMISSIONS) *ADMISSION_SYNTAX_get0_contentsOfAdmissions(
  const ADMISSION_SYNTAX *as);
void ADMISSION_SYNTAX_set0_contentsOfAdmissions(
  ADMISSION_SYNTAX *as, STACK_OF(ADMISSIONS) *a);
```

```
const GENERAL_NAME *ADMISSIONS_get0_admissionAuthority(const ADMISSIONS *a);
void ADMISSIONS_set0_admissionAuthority(ADMISSIONS *a, GENERAL_NAME *aa);
const NAMING_AUTHORITY *ADMISSIONS_get0_namingAuthority(const ADMISSIONS *a);
void ADMISSIONS_set0_namingAuthority(ADMISSIONS *a, NAMING_AUTHORITY *na);
const PROFESSION_INFOS *ADMISSIONS_get0_professionInfos(const ADMISSIONS *a);
void ADMISSIONS_set0_professionInfos(ADMISSIONS *a, PROFESSION_INFOS *pi);
const ASN1_OCTET_STRING *PROFESSION_INFO_get0_addProfessionInfo(
   const PROFESSION_INFO *pi);
void PROFESSION_INFO_set0_addProfessionInfo(
  PROFESSION_INFO *pi, ASN1_OCTET_STRING *aos);
const NAMING_AUTHORITY *PROFESSION_INFO_get0_namingAuthority(
  const PROFESSION_INFO *pi);
void PROFESSION_INFO_set0_namingAuthority(
  PROFESSION_INFO *pi, NAMING_AUTHORITY *na);
const STACK_OF(ASN1_STRING) *PROFESSION_INFO_get0_professionItems(
  const PROFESSION_INFO *pi);
void PROFESSION_INFO_set0_professionItems(
  PROFESSION_INFO *pi, STACK_OF(ASN1_STRING) *as);
const STACK_OF(ASN1_OBJECT) *PROFESSION_INFO_get0_professionOIDs(
  const PROFESSION_INFO *pi);
void PROFESSION_INFO_set0_professionOIDs(
  PROFESSION_INFO *pi, STACK_OF(ASN1_OBJECT) *po);
const ASN1_PRINTABLESTRING *PROFESSION_INFO_get0_registrationNumber(
  const PROFESSION_INFO *pi);
void PROFESSION_INFO_set0_registrationNumber(
  PROFESSION_INFO *pi, ASN1_PRINTABLESTRING *rn);

# ifdef  __cplusplus
}
# endif
#endif
```

The MIT License (MIT)

Copyright (c) 2013 Josh Glazebrook

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR

COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF
OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
The ISC License

Copyright (c) GitHub Inc.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
(The MIT License)

Copyright (C) 2014-2017 by Vitaly Puzrin and Andrei Tuputcyn

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.
/*
* WARNING: do not edit!
* Generated by Makefile from providers/common/include/prov/der_ec.h.in
*
* Copyright 2020-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use

```
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#include "crypto/ec.h"
#include "internal/der.h"

/* Well known OIDs precompiled */

/*
* ecdsa-with-SHA1 OBJECT IDENTIFIER ::= { id-ecSigType 1 }
*/
#define DER_OID_V_ecdsa_with_SHA1 DER_P_OBJECT, 7, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x04, 0x01
#define DER_OID_SZ_ecdsa_with_SHA1 9
extern const unsigned char ossl_der_oid_ecdsa_with_SHA1[DER_OID_SZ_ecdsa_with_SHA1];

/*
* id-ecPublicKey OBJECT IDENTIFIER ::= { id-publicKeyType 1 }
*/
#define DER_OID_V_id_ecPublicKey DER_P_OBJECT, 7, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x02, 0x01
#define DER_OID_SZ_id_ecPublicKey 9
extern
 const unsigned char ossl_der_oid_id_ecPublicKey[DER_OID_SZ_id_ecPublicKey];

/*
* c2pnb163v1  OBJECT IDENTIFIER  ::=  { c-TwoCurve  1 }
*/
#define DER_OID_V_c2pnb163v1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x01
#define DER_OID_SZ_c2pnb163v1 10
extern const unsigned char ossl_der_oid_c2pnb163v1[DER_OID_SZ_c2pnb163v1];

/*
* c2pnb163v2  OBJECT IDENTIFIER  ::=  { c-TwoCurve  2 }
*/
#define DER_OID_V_c2pnb163v2 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x02
#define DER_OID_SZ_c2pnb163v2 10
extern const unsigned char ossl_der_oid_c2pnb163v2[DER_OID_SZ_c2pnb163v2];

/*
* c2pnb163v3  OBJECT IDENTIFIER  ::=  { c-TwoCurve  3 }
*/
#define DER_OID_V_c2pnb163v3 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x03
#define DER_OID_SZ_c2pnb163v3 10
extern const unsigned char ossl_der_oid_c2pnb163v3[DER_OID_SZ_c2pnb163v3];

/*
* c2pnb176w1  OBJECT IDENTIFIER  ::=  { c-TwoCurve  4 }
```

```
*/
#define DER_OID_V_c2pnb176w1 DER_P_OBJECT, 8, 0x2A, 0x86,
 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x04
#define DER_OID_SZ_c2pnb176w1 10
extern const unsigned char ossl_der_oid_c2pnb176w1[DER_OID_SZ_c2pnb176w1];

/*
* c2tnb191v1  OBJECT IDENTIFIER  ::=  { c-TwoCurve  5 }
*/
#define DER_OID_V_c2tnb191v1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x05
#define DER_OID_SZ_c2tnb191v1 10
extern const unsigned char ossl_der_oid_c2tnb191v1[DER_OID_SZ_c2tnb191v1];

/*
* c2tnb191v2  OBJECT IDENTIFIER  ::=  { c-TwoCurve  6 }
*/
#define DER_OID_V_c2tnb191v2 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x06
#define DER_OID_SZ_c2tnb191v2 10
extern const unsigned char ossl_der_oid_c2tnb191v2[DER_OID_SZ_c2tnb191v2];

/*
* c2tnb191v3  OBJECT IDENTIFIER  ::=  { c-TwoCurve  7 }
*/
#define DER_OID_V_c2tnb191v3 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x07
#define DER_OID_SZ_c2tnb191v3 10
extern const unsigned char ossl_der_oid_c2tnb191v3[DER_OID_SZ_c2tnb191v3];

/*
* c2onb191v4  OBJECT IDENTIFIER  ::=  { c-TwoCurve
 8 }
*/
#define DER_OID_V_c2onb191v4 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x08
#define DER_OID_SZ_c2onb191v4 10
extern const unsigned char ossl_der_oid_c2onb191v4[DER_OID_SZ_c2onb191v4];

/*
* c2onb191v5  OBJECT IDENTIFIER  ::=  { c-TwoCurve  9 }
*/
#define DER_OID_V_c2onb191v5 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x09
#define DER_OID_SZ_c2onb191v5 10
extern const unsigned char ossl_der_oid_c2onb191v5[DER_OID_SZ_c2onb191v5];

/*
* c2pnb208w1  OBJECT IDENTIFIER  ::=  { c-TwoCurve 10 }
*/
#define DER_OID_V_c2pnb208w1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x0A
#define DER_OID_SZ_c2pnb208w1 10
extern const unsigned char ossl_der_oid_c2pnb208w1[DER_OID_SZ_c2pnb208w1];
```

```
/*
* c2tnb239v1  OBJECT IDENTIFIER  ::=  { c-TwoCurve 11 }
*/
#define DER_OID_V_c2tnb239v1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x0B
#define DER_OID_SZ_c2tnb239v1 10
extern const unsigned char ossl_der_oid_c2tnb239v1[DER_OID_SZ_c2tnb239v1];

/*
 * c2tnb239v2  OBJECT IDENTIFIER  ::=  { c-TwoCurve 12 }
*/
#define DER_OID_V_c2tnb239v2 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x0C
#define DER_OID_SZ_c2tnb239v2 10
extern const unsigned char ossl_der_oid_c2tnb239v2[DER_OID_SZ_c2tnb239v2];

/*
* c2tnb239v3  OBJECT IDENTIFIER  ::=  { c-TwoCurve 13 }
*/
#define DER_OID_V_c2tnb239v3 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x0D
#define DER_OID_SZ_c2tnb239v3 10
extern const unsigned char ossl_der_oid_c2tnb239v3[DER_OID_SZ_c2tnb239v3];

/*
* c2onb239v4  OBJECT IDENTIFIER  ::=  { c-TwoCurve 14 }
*/
#define DER_OID_V_c2onb239v4 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x0E
#define DER_OID_SZ_c2onb239v4 10
extern const unsigned char ossl_der_oid_c2onb239v4[DER_OID_SZ_c2onb239v4];

/*
* c2onb239v5  OBJECT IDENTIFIER  ::=  { c-TwoCurve 15 }
*/
#define DER_OID_V_c2onb239v5 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x0F
#define DER_OID_SZ_c2onb239v5 10
extern
 const unsigned char ossl_der_oid_c2onb239v5[DER_OID_SZ_c2onb239v5];

/*
* c2pnb272w1  OBJECT IDENTIFIER  ::=  { c-TwoCurve 16 }
*/
#define DER_OID_V_c2pnb272w1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x10
#define DER_OID_SZ_c2pnb272w1 10
extern const unsigned char ossl_der_oid_c2pnb272w1[DER_OID_SZ_c2pnb272w1];

/*
* c2pnb304w1  OBJECT IDENTIFIER  ::=  { c-TwoCurve 17 }
*/
#define DER_OID_V_c2pnb304w1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x11
```

```
#define DER_OID_SZ_c2pnb304w1 10
extern const unsigned char ossl_der_oid_c2pnb304w1[DER_OID_SZ_c2pnb304w1];

/*
* c2tnb359v1  OBJECT IDENTIFIER  ::=  { c-TwoCurve 18 }
*/
#define DER_OID_V_c2tnb359v1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x12
#define DER_OID_SZ_c2tnb359v1 10
extern const unsigned char ossl_der_oid_c2tnb359v1[DER_OID_SZ_c2tnb359v1];

/*
* c2pnb368w1  OBJECT IDENTIFIER  ::=  { c-TwoCurve 19 }
*/
#define DER_OID_V_c2pnb368w1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48,
 0xCE, 0x3D, 0x03, 0x00, 0x13
#define DER_OID_SZ_c2pnb368w1 10
extern const unsigned char ossl_der_oid_c2pnb368w1[DER_OID_SZ_c2pnb368w1];

/*
* c2tnb431r1  OBJECT IDENTIFIER  ::=  { c-TwoCurve 20 }
*/
#define DER_OID_V_c2tnb431r1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x00, 0x14
#define DER_OID_SZ_c2tnb431r1 10
extern const unsigned char ossl_der_oid_c2tnb431r1[DER_OID_SZ_c2tnb431r1];

/*
* prime192v1  OBJECT IDENTIFIER  ::=  { primeCurve  1 }
*/
#define DER_OID_V_prime192v1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x01, 0x01
#define DER_OID_SZ_prime192v1 10
extern const unsigned char ossl_der_oid_prime192v1[DER_OID_SZ_prime192v1];

/*
* prime192v2  OBJECT IDENTIFIER  ::=  { primeCurve  2 }
*/
#define DER_OID_V_prime192v2 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x01, 0x02
#define DER_OID_SZ_prime192v2 10
extern const unsigned char ossl_der_oid_prime192v2[DER_OID_SZ_prime192v2];

/*
* prime192v3  OBJECT IDENTIFIER  ::=  { primeCurve  3 }
*/
#define
 DER_OID_V_prime192v3 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x01, 0x03
#define DER_OID_SZ_prime192v3 10
extern const unsigned char ossl_der_oid_prime192v3[DER_OID_SZ_prime192v3];

/*
```

```
* prime239v1  OBJECT IDENTIFIER  ::=  { primeCurve  4 }
*/
#define DER_OID_V_prime239v1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x01, 0x04
#define DER_OID_SZ_prime239v1 10
extern const unsigned char ossl_der_oid_prime239v1[DER_OID_SZ_prime239v1];

/*
* prime239v2  OBJECT IDENTIFIER  ::=  { primeCurve  5 }
*/
#define DER_OID_V_prime239v2 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x01, 0x05
#define DER_OID_SZ_prime239v2 10
extern const unsigned char ossl_der_oid_prime239v2[DER_OID_SZ_prime239v2];

/*
* prime239v3  OBJECT IDENTIFIER  ::=  { primeCurve  6 }
*/
#define DER_OID_V_prime239v3 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x01, 0x06
#define DER_OID_SZ_prime239v3 10
extern const unsigned char ossl_der_oid_prime239v3[DER_OID_SZ_prime239v3];

/*
 * prime256v1  OBJECT IDENTIFIER  ::=  { primeCurve  7 }
*/
#define DER_OID_V_prime256v1 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x03, 0x01, 0x07
#define DER_OID_SZ_prime256v1 10
extern const unsigned char ossl_der_oid_prime256v1[DER_OID_SZ_prime256v1];

/*
* ecdsa-with-SHA224 OBJECT IDENTIFIER ::= { iso(1) member-body(2)
*      us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2(3) 1 }
*/
#define DER_OID_V_ecdsa_with_SHA224 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x04, 0x03,
0x01
#define DER_OID_SZ_ecdsa_with_SHA224 10
extern const unsigned char ossl_der_oid_ecdsa_with_SHA224[DER_OID_SZ_ecdsa_with_SHA224];

/*
* ecdsa-with-SHA256 OBJECT IDENTIFIER ::= { iso(1) member-body(2)
*      us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2(3) 2 }
*/
#define DER_OID_V_ecdsa_with_SHA256 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x04, 0x03,
0x02
#define DER_OID_SZ_ecdsa_with_SHA256 10
extern const unsigned char ossl_der_oid_ecdsa_with_SHA256[DER_OID_SZ_ecdsa_with_SHA256];

/*
 * ecdsa-with-SHA384 OBJECT IDENTIFIER ::= { iso(1) member-body(2)
*      us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2(3) 3 }
```

```
*/
#define DER_OID_V_ecdsa_with_SHA384 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x04, 0x03,
0x03
#define DER_OID_SZ_ecdsa_with_SHA384 10
extern const unsigned char ossl_der_oid_ecdsa_with_SHA384[DER_OID_SZ_ecdsa_with_SHA384];

/*
* ecdsa-with-SHA512 OBJECT IDENTIFIER ::= { iso(1) member-body(2)
*      us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2(3) 4 }
*/
#define DER_OID_V_ecdsa_with_SHA512 DER_P_OBJECT, 8, 0x2A, 0x86, 0x48, 0xCE, 0x3D, 0x04, 0x03,
0x04
#define DER_OID_SZ_ecdsa_with_SHA512 10
extern const unsigned char ossl_der_oid_ecdsa_with_SHA512[DER_OID_SZ_ecdsa_with_SHA512];

/*
* id-ecdsa-with-sha3-224 OBJECT IDENTIFIER ::= { sigAlgs 9 }
*/
#define DER_OID_V_id_ecdsa_with_sha3_224 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x03, 0x09
#define DER_OID_SZ_id_ecdsa_with_sha3_224 11
extern const
 unsigned char ossl_der_oid_id_ecdsa_with_sha3_224[DER_OID_SZ_id_ecdsa_with_sha3_224];

/*
* id-ecdsa-with-sha3-256 OBJECT IDENTIFIER ::= { sigAlgs 10 }
*/
#define DER_OID_V_id_ecdsa_with_sha3_256 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x03, 0x0A
#define DER_OID_SZ_id_ecdsa_with_sha3_256 11
extern const unsigned char ossl_der_oid_id_ecdsa_with_sha3_256[DER_OID_SZ_id_ecdsa_with_sha3_256];

/*
* id-ecdsa-with-sha3-384 OBJECT IDENTIFIER ::= { sigAlgs 11 }
*/
#define DER_OID_V_id_ecdsa_with_sha3_384 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x03, 0x0B
#define DER_OID_SZ_id_ecdsa_with_sha3_384 11
extern const unsigned char ossl_der_oid_id_ecdsa_with_sha3_384[DER_OID_SZ_id_ecdsa_with_sha3_384];

/*
* id-ecdsa-with-sha3-512 OBJECT IDENTIFIER ::= { sigAlgs 12 }
*/
#define DER_OID_V_id_ecdsa_with_sha3_512 DER_P_OBJECT, 9, 0x60, 0x86, 0x48, 0x01, 0x65, 0x03, 0x04,
0x03, 0x0C
#define DER_OID_SZ_id_ecdsa_with_sha3_512 11
extern const unsigned char ossl_der_oid_id_ecdsa_with_sha3_512[DER_OID_SZ_id_ecdsa_with_sha3_512];
```

```
/*
 Subject Public Key Info */
int ossl_DER_w_algorithmIdentifier_EC(WPACKET *pkt, int cont, EC_KEY *ec);
/* Signature */
int ossl_DER_w_algorithmIdentifier_ECDSA_with_MD(WPACKET *pkt, int cont,
                                 EC_KEY *ec, int mdnid);
// Copyright 2016 The Chromium Authors. All rights reserved.
//
// Redistribution and use in source and binary forms, with or without
// modification, are permitted provided that the following conditions are
// met:
//
//    * Redistributions of source code must retain the above copyright
// notice, this list of conditions and the following disclaimer.
//    * Redistributions in binary form must reproduce the above
// copyright notice, this list of conditions and the following disclaimer
// in the documentation and/or other materials provided with the
// distribution.
//    * Neither the name of Google Inc. nor the names of its
// contributors may be used to endorse or promote products derived from
// this software without specific prior written permission.
//
// THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
// "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
// LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
// A PARTICULAR PURPOSE
 ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
// OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
// SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
// LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
// DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
// THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
// (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
// OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
                GNU LESSER GENERAL PUBLIC LICENSE
                   Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL.  It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

                        Preamble
```

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software

patents pose a constant threat to the existence of
any free program. We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder. Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License. This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License. We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

When a program is linked with a library, whether statically or using
a shared library, the combination of the two is legally speaking a
combined work, a derivative of the original library. The ordinary
General Public License therefore permits
such linking only if the
entire combination fits its criteria of freedom. The Lesser General
Public License permits more lax criteria for linking other code with
the library.

We call this license the "Lesser" General Public License because it
does Less to protect the user's freedom than the ordinary General
Public License. It also provides other free software developers Less
of an advantage over competing non-free programs. These disadvantages
are the reason we use the ordinary General Public License for many
libraries. However, the Lesser license provides advantages in certain
special circumstances.

For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it becomes
a de-facto standard. To achieve this, non-free programs must be
allowed to use the library. A more frequent case is that a free
library does the same job as widely used non-free libraries. In this
case, there is little to gain by limiting the
free library to free
software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free
programs enables a greater number of people to use a large body of
free software. For example, permission to use the GNU C Library in
non-free programs enables many more people to use the whole GNU
operating system, as well as its variant, the GNU/Linux operating
system.

Although the Lesser General Public License is Less protective of the

users' freedom, it does ensure that the user of a program that is
linked with the Library has the freedom and the wherewithal to run
that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and
modification follow. Pay close attention to the difference between a
"work based on the library" and a "work that uses the library". The
former contains code derived from the library, whereas the latter must
be combined with the library in order
to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other
program which contains a notice placed by the copyright holder or
other authorized party saying it may be distributed under the terms of
this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work
which has been distributed under these terms. A "work based on the
Library" means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or translated
straightforwardly into another
language. (Hereinafter, translation is
included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for
making modifications to it. For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control compilation
and installation of the library.

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent of the use of the Library in a tool for
writing it). Whether that is true depends on what the Library does
and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's

complete source code as you receive it, in any medium,
provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any
warranty; and distribute a copy of this License along with the
Library.

You may charge a fee for the physical act of transferring a copy,
and you may at your option offer warranty protection in exchange for a
fee.

2. You may modify your copy or copies of the Library or any portion
of it, thus forming a work based on the Library, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices
stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no
charge to all third parties under the terms
of this License.

d) If a facility in the modified Library refers to a function or a
table of data to be supplied by an application program that uses
the facility, other than as an argument passed when the facility
is invoked, then you must make a good faith effort to ensure that,
in the event an application does not supply such function or
table, the facility still operates, and performs whatever part of
its purpose remains meaningful.

(For example, a function in a library to compute square roots has
a purpose that is entirely well-defined independent of the
application. Therefore, Subsection 2d requires that any
application-supplied function or table used by this function must
be optional: if the application does not supply it, the square
root function must still compute square roots.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work are not derived from the Library,
and can be
reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based

on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or

linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany

the work with the complete corresponding
machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly
with a modified version of the library, if
the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally
distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not

excuse
you from the conditions of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all. For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system
which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

13. The Free Software Foundation may publish
revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a

license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision
will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE
LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is

safest to attach them to the start of each source file to most effectively
convey
the exclusion of warranty; and each file should have at least the
"copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301
USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
The ISC License

Copyright (c) Isaac Z. Schlueter

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES

WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
The 3-Clause BSD License

Copyright web-platform-tests contributors

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL
 THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright (c) 2010 by Armin Ronacher and contributors. See AUTHORS
for more details.

Some rights reserved.

Redistribution and use in source and binary forms of the software as well
as documentation, with or without modification, are permitted provided
that the following conditions are met:

* Redistributions of source code must retain the above copyright
 notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above
 copyright notice, this list of conditions and the following
 disclaimer in the documentation and/or other materials provided
 with the distribution.

* The names of the contributors may not be used to endorse or
 promote products derived from this software without specific
 prior written permission.

THIS SOFTWARE AND DOCUMENTATION IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND
FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE AND DOCUMENTATION, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

```
/* WARNING: do not edit! */
/* Generated by Makefile from include/crypto/bn_conf.h.in */
/*
* Copyright 2016-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#ifndef OSSL_CRYPTO_BN_CONF_H
# define OSSL_CRYPTO_BN_CONF_H
# pragma once

/*
* The contents of this file are not used in the UEFI build, as
* both 32-bit and 64-bit builds are supported from a single run
* of the Configure script.
*/

/* Should we define BN_DIV2W here? */

/* Only one for the following should be defined */
#define SIXTY_FOUR_BIT_LONG
#undef SIXTY_FOUR_BIT
#undef THIRTY_TWO_BIT

#endif
```

Copyright (c) 2015, Contributors

Permission to use, copy, modify, and/or distribute this software
for any purpose with or without fee is hereby granted, provided
that the above copyright notice and this permission notice

appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE
LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES
OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS,
WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION,
ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct

or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "{}" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright 2018-2025 The simdjson authors

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

```
/*
* WARNING: do not edit!
* Generated by configdata.pm from Configurations/common0.tmpl, Configurations/unix-Makefile.tmpl
* via Makefile.in
*
* Copyright 2016-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#ifndef OPENSSL_CONFIGURATION_H
# define OPENSSL_CONFIGURATION_H
# pragma once

# ifdef  __cplusplus
extern "C" {
# endif

# ifdef OPENSSL_ALGORITHM_DEFINES
```

```
#  error OPENSSL_ALGORITHM_DEFINES no longer supported
# endif

/*
* OpenSSL was configured with the following options:
*/

# define OPENSSL_CONFIGURED_API 30000
# ifndef OPENSSL_RAND_SEED_OS
#  define OPENSSL_RAND_SEED_OS
# endif
# ifndef OPENSSL_THREADS
#  define OPENSSL_THREADS
# endif
# ifndef OPENSSL_NO_AFALGENG
#  define OPENSSL_NO_AFALGENG
# endif
# ifndef
 OPENSSL_NO_ASAN
#  define OPENSSL_NO_ASAN
# endif
# ifndef OPENSSL_NO_ASM
#  define OPENSSL_NO_ASM
# endif
# ifndef OPENSSL_NO_COMP
#  define OPENSSL_NO_COMP
# endif
# ifndef OPENSSL_NO_CRYPTO_MDEBUG
#  define OPENSSL_NO_CRYPTO_MDEBUG
# endif
# ifndef OPENSSL_NO_CRYPTO_MDEBUG_BACKTRACE
#  define OPENSSL_NO_CRYPTO_MDEBUG_BACKTRACE
# endif
# ifndef OPENSSL_NO_EC_NISTP_64_GCC_128
#  define OPENSSL_NO_EC_NISTP_64_GCC_128
# endif
# ifndef OPENSSL_NO_EGD
#  define OPENSSL_NO_EGD
# endif
# ifndef OPENSSL_NO_EXTERNAL_TESTS
#  define OPENSSL_NO_EXTERNAL_TESTS
# endif
# ifndef OPENSSL_NO_FUZZ_AFL
#  define OPENSSL_NO_FUZZ_AFL
# endif
# ifndef OPENSSL_NO_FUZZ_LIBFUZZER
#  define OPENSSL_NO_FUZZ_LIBFUZZER
# endif
```

```
# ifndef OPENSSL_NO_KTLS
#  define OPENSSL_NO_KTLS
# endif
# ifndef OPENSSL_NO_LOADERENG
#  define OPENSSL_NO_LOADERENG
# endif
# ifndef OPENSSL_NO_MD2
#  define OPENSSL_NO_MD2
# endif
# ifndef OPENSSL_NO_MSAN
#  define OPENSSL_NO_MSAN
# endif
# ifndef OPENSSL_NO_RC5
#  define OPENSSL_NO_RC5
#
 endif
# ifndef OPENSSL_NO_SCTP
#  define OPENSSL_NO_SCTP
# endif
# ifndef OPENSSL_NO_SSL3
#  define OPENSSL_NO_SSL3
# endif
# ifndef OPENSSL_NO_SSL3_METHOD
#  define OPENSSL_NO_SSL3_METHOD
# endif
# ifndef OPENSSL_NO_TRACE
#  define OPENSSL_NO_TRACE
# endif
# ifndef OPENSSL_NO_UBSAN
#  define OPENSSL_NO_UBSAN
# endif
# ifndef OPENSSL_NO_UNIT_TEST
#  define OPENSSL_NO_UNIT_TEST
# endif
# ifndef OPENSSL_NO_UPLINK
#  define OPENSSL_NO_UPLINK
# endif
# ifndef OPENSSL_NO_WEAK_SSL_CIPHERS
#  define OPENSSL_NO_WEAK_SSL_CIPHERS
# endif
# ifndef OPENSSL_NO_DYNAMIC_ENGINE
#  define OPENSSL_NO_DYNAMIC_ENGINE
# endif


/* Generate 80386 code? */
# undef I386_ONLY
```

```
/*
* The following are cipher-specific, but are part of the public API.
*/
# if !defined(OPENSSL_SYS_UEFI)
#  undef BN_LLONG
/* Only one for the following should be defined */
#  define SIXTY_FOUR_BIT_LONG
#  undef SIXTY_FOUR_BIT
#  undef THIRTY_TWO_BIT
# endif

# define RC4_INT unsigned int

# ifdef  __cplusplus
}
# endif

#endif
                    /* OPENSSL_CONFIGURATION_H */
/*
* WARNING: do not edit!
* Generated by Makefile from providers/common/include/prov/der_sm2.h.in
*
* Copyright 2020-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#include "crypto/ec.h"
#include "internal/der.h"

/* Well known OIDs precompiled */

/*
* sm2-with-SM3 OBJECT IDENTIFIER ::= { sm-scheme 501 }
*/
#define DER_OID_V_sm2_with_SM3 DER_P_OBJECT, 8, 0x2A, 0x81, 0x1C, 0xCF, 0x55, 0x01, 0x83, 0x75
#define DER_OID_SZ_sm2_with_SM3 10
extern const unsigned char ossl_der_oid_sm2_with_SM3[DER_OID_SZ_sm2_with_SM3];

/*
* curveSM2 OBJECT IDENTIFIER ::= { sm-scheme 301 }
*/
#define DER_OID_V_curveSM2 DER_P_OBJECT, 8, 0x2A, 0x81, 0x1C, 0xCF, 0x55, 0x01, 0x82, 0x2D
#define DER_OID_SZ_curveSM2 10
```

extern const unsigned char
 ossl_der_oid_curveSM2[DER_OID_SZ_curveSM2];

/* Subject Public Key Info */
int ossl_DER_w_algorithmIdentifier_SM2(WPACKET *pkt, int cont, EC_KEY *ec);
/* Signature */
int ossl_DER_w_algorithmIdentifier_SM2_with_MD(WPACKET *pkt, int cont,
                                               EC_KEY *ec, int mdnid);
Artistic License 2.0
This software is released under the MIT license:

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR
COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER
IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION
 WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
The JsonCpp library's source code, including accompanying documentation,
tests and demonstration applications, are licensed under the following
conditions...

The author (Baptiste Lepilleur) explicitly disclaims copyright in all
jurisdictions which recognize such a disclaimer. In such jurisdictions,
this software is released into the Public Domain.

In jurisdictions which do not recognize Public Domain property (e.g. Germany as of
2010), this software is Copyright (c) 2007-2010 by Baptiste Lepilleur, and is
released under the terms of the MIT License (see below).

In jurisdictions which recognize Public Domain property, the user of this
software may choose to accept it either as 1) Public Domain, 2) under the
conditions of the MIT License (see below), or 3) under the terms of dual
Public Domain/MIT License conditions described here, as they choose.

The MIT License is about as close to Public Domain as a license can get, and is
described in clear, concise terms at:

http://en.wikipedia.org/wiki/MIT_License

The full text of the MIT License follows:

==
Copyright (c) 2007-2010 Baptiste Lepilleur

Permission is hereby granted, free of charge, to any person
obtaining a copy of this software and associated documentation
files (the "Software"), to deal in the Software without
restriction, including without limitation the rights to use, copy,
modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT
HOLDERS
BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN
ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
==
(END LICENSE TEXT)

The MIT license is compatible with both the GPL and commercial
software, affording one all of the rights of Public Domain with the
minor nuisance of being required to keep the above copyright notice
and license text in the source code. Note also that by accepting the
Public Domain "license" you can re-license your copy using whatever
license you like.
The npm application
Copyright (c) npm, Inc. and Contributors
Licensed on the terms of The Artistic License 2.0

Node package dependencies of the npm application
Copyright (c) their respective copyright owners
Licensed on their respective license terms

The npm public registry at https://registry.npmjs.org
and the npm website at https://www.npmjs.com
Operated by npm, Inc.

Use governed by terms published on https://www.npmjs.com

"Node.js"
Trademark Joyent, Inc., https://joyent.com
Neither npm nor npm, Inc. are affiliated with Joyent, Inc.

The Node.js application
Project of Node Foundation, https://nodejs.org

The npm Logo
Copyright (c) Mathias Pettersson and Brian Hammond

"Gubblebum Blocky" typeface
Copyright (c) Tjarda Koster, https://jelloween.deviantart.com
Used with permission

The Artistic License 2.0

Copyright (c) 2000-2006, The Perl Foundation.

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

This
license establishes the terms under which a given free software
Package may be copied, modified, distributed, and/or redistributed.
The intent is that the Copyright Holder maintains some artistic
control over the development of that Package while still keeping the
Package available as open source and free software.

You are always permitted to make arrangements wholly outside of this
license directly with the Copyright Holder of a given Package. If the
terms of this license do not permit the full use that you propose to
make of the Package, you should contact the Copyright Holder and seek
a different licensing arrangement.

Definitions

"Copyright Holder" means the individual(s) or organization(s)
named in the copyright notice for the entire Package.

"Contributor" means any party that has contributed code or other

material to the Package, in accordance with the Copyright Holder's procedures.

"You" and "your" means any person who would like to copy, distribute, or modify the Package.

"Package" means the collection of files distributed by the Copyright Holder, and derivatives of that collection and/or of those files. A given Package may consist of either the Standard Version, or a Modified Version.

"Distribute" means providing a copy of the Package or making it accessible to anyone else, or in the case of a company or organization, to others outside of your company or organization.

"Distributor Fee" means any fee that you charge for Distributing this Package or providing support for this Package to another party. It does not mean licensing fees.

"Standard Version" refers to the Package if it has not been modified, or has been modified only in ways explicitly requested by the Copyright Holder.

"Modified Version" means the Package, if it has been changed, and such changes were not explicitly requested by the Copyright Holder.

"Original License" means this Artistic License as Distributed with the Standard Version of the Package, in its current version or as it may be modified by The Perl Foundation in the future.

"Source" form means the source code, documentation source, and configuration files for the Package.

"Compiled" form means the compiled bytecode, object code, binary, or any other form resulting from mechanical transformation or translation of the Source form.

Permission for Use and Modification Without Distribution

(1) You are permitted to use the Standard Version and create and use Modified Versions for any purpose without restriction, provided that you do not Distribute the Modified Version.

Permissions for Redistribution of the Standard Version

(2) You may Distribute verbatim copies of the Source form of the Standard Version of this Package in any medium without restriction, either gratis or for a Distributor Fee, provided that you duplicate all of the original copyright notices and associated disclaimers. At your discretion, such verbatim copies may or may not include a Compiled form of the Package.

(3) You may apply any bug fixes, portability changes, and other modifications made available from the Copyright Holder. The resulting Package will still be considered the Standard Version, and as such will be subject to the Original License.

Distribution of Modified Versions of the Package as Source

(4) You may Distribute your Modified Version as Source (either gratis or for a Distributor Fee, and with or without a Compiled form of the Modified Version) provided that you clearly document how it differs from the Standard Version, including, but not limited to, documenting any non-standard features, executables, or modules, and provided that you do at least ONE of the following:

(a) make the Modified Version available to the Copyright Holder of the Standard Version, under the Original License, so that the Copyright Holder may include your modifications in the Standard Version.

(b) ensure that installation of your Modified Version does not prevent the user installing or running the Standard Version. In addition, the Modified Version must bear a name that is different from the name of the Standard Version.

(c) allow anyone who receives a copy of the Modified Version to make the Source form of the Modified Version available to others under

(i) the Original License or

(ii) a license that permits the licensee to freely copy, modify and redistribute the Modified Version using the same licensing terms that apply to the copy that the licensee received, and requires that the Source form of the Modified Version, and of any works derived from it, be made freely available in that license fees are prohibited but Distributor Fees are allowed.

Distribution of Compiled Forms of the Standard Version
or Modified Versions without the Source

(5)
You may Distribute Compiled forms of the Standard Version without the Source, provided that you include complete instructions on how to get the Source of the Standard Version. Such instructions must be valid at the time of your distribution. If these instructions, at any time while you are carrying out such distribution, become invalid, you must provide new instructions on demand or cease further distribution. If you provide valid instructions or cease distribution within thirty days after you become aware that the instructions are invalid, then you do not forfeit any of your rights under this license.

(6) You may Distribute a Modified Version in Compiled form without the Source, provided that you comply with Section 4 with respect to the Source of the Modified Version.

Aggregating or Linking the Package

(7) You may aggregate the Package (either the Standard Version or Modified Version) with other packages and Distribute the resulting aggregation provided that you do not charge
a licensing fee for the
Package. Distributor Fees are permitted, and licensing fees for other components in the aggregation are permitted. The terms of this license apply to the use and Distribution of the Standard or Modified Versions as included in the aggregation.

(8) You are permitted to link Modified and Standard Versions with other works, to embed the Package in a larger work of your own, or to build stand-alone binary or bytecode versions of applications that include the Package, and Distribute the result without restriction, provided the result does not expose a direct interface to the Package.

Items That are Not Considered Part of a Modified Version

(9) Works (including, but not limited to, modules and scripts) that merely extend or make use of the Package, do not, by themselves, cause the Package to be a Modified Version. In addition, such works are not considered parts of the Package itself, and are not subject to the terms of this license.

General Provisions

(10)
Any use, modification, and distribution of the Standard or Modified Versions is governed by this Artistic License. By using, modifying or distributing the Package, you accept this license. Do not use, modify, or distribute the Package, if you do not accept this license.

(11) If your Modified Version has been derived from a Modified Version made by someone other than you, you are nevertheless required to ensure that your Modified Version complies with the requirements of this license.

(12) This license does not grant you the right to use any trademark, service mark, tradename, or logo of the Copyright Holder.

(13) This license includes the non-exclusive, worldwide, free-of-charge patent license to make, have made, use, offer to sell, sell, import and otherwise transfer the Package with respect to any patent claims licensable by the Copyright Holder that are necessarily infringed by the Package. If you institute patent litigation (including a cross-claim or counterclaim) against any party alleging that the Package constitutes direct or contributory patent infringement, then this Artistic License to you shall terminate on the date that such litigation is filed.

(14) Disclaimer of Warranty:
THE PACKAGE IS PROVIDED BY THE COPYRIGHT HOLDER AND CONTRIBUTORS "AS IS' AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES. THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT ARE DISCLAIMED TO THE EXTENT PERMITTED BY YOUR LOCAL LAW. UNLESS REQUIRED BY LAW, NO COPYRIGHT HOLDER OR CONTRIBUTOR WILL BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING IN ANY WAY OUT OF THE USE OF THE PACKAGE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted"

means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each

Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2023 The Sigstore Authors

Licensed under the Apache License, Version 2.0 (the "License");

you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

The ISC License

Copyright (c) npm, Inc.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

The ISC License

Copyright (c) 2009-2023 Isaac Z. Schlueter and Contributors

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR
IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Copyright (c) 2008-2009 Bjoern Hoehrmann <bjoern@hoehrmann.de>

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
/*
* WARNING: do not edit!
* Generated by apps/progs.pl
*
* Copyright 1995-2025 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

#include "function.h"

extern int asn1parse_main(int argc, char *argv[]);
extern int ca_main(int argc, char *argv[]);
extern int ciphers_main(int argc, char *argv[]);
extern int cmp_main(int argc, char *argv[]);
extern int cms_main(int argc, char *argv[]);
extern int crl_main(int argc, char *argv[]);
extern int crl2pkcs7_main(int argc, char *argv[]);
extern int dgst_main(int argc, char *argv[]);
extern int dhparam_main(int argc, char *argv[]);
extern int dsa_main(int argc, char *argv[]);
extern int dsaparam_main(int argc, char *argv[]);
extern int ec_main(int argc, char *argv[]);
extern int ecparam_main(int
 argc, char *argv[]);
extern int enc_main(int argc, char *argv[]);
extern int engine_main(int argc, char *argv[]);
extern int errstr_main(int argc, char *argv[]);
extern int fipsinstall_main(int argc, char *argv[]);
extern int gendsa_main(int argc, char *argv[]);
extern int genpkey_main(int argc, char *argv[]);
extern int genrsa_main(int argc, char *argv[]);
extern int help_main(int argc, char *argv[]);
```

```
extern int info_main(int argc, char *argv[]);
extern int kdf_main(int argc, char *argv[]);
extern int list_main(int argc, char *argv[]);
extern int mac_main(int argc, char *argv[]);
extern int nseq_main(int argc, char *argv[]);
extern int ocsp_main(int argc, char *argv[]);
extern int passwd_main(int argc, char *argv[]);
extern int pkcs12_main(int argc, char *argv[]);
extern int pkcs7_main(int argc, char *argv[]);
extern int pkcs8_main(int argc, char *argv[]);
extern int pkey_main(int argc, char *argv[]);
extern int pkeyparam_main(int argc, char *argv[]);
extern int pkeyutl_main(int
 argc, char *argv[]);
extern int prime_main(int argc, char *argv[]);
extern int rand_main(int argc, char *argv[]);
extern int rehash_main(int argc, char *argv[]);
extern int req_main(int argc, char *argv[]);
extern int rsa_main(int argc, char *argv[]);
extern int rsautl_main(int argc, char *argv[]);
extern int s_client_main(int argc, char *argv[]);
extern int s_server_main(int argc, char *argv[]);
extern int s_time_main(int argc, char *argv[]);
extern int sess_id_main(int argc, char *argv[]);
extern int smime_main(int argc, char *argv[]);
extern int speed_main(int argc, char *argv[]);
extern int spkac_main(int argc, char *argv[]);
extern int srp_main(int argc, char *argv[]);
extern int storeutl_main(int argc, char *argv[]);
extern int ts_main(int argc, char *argv[]);
extern int verify_main(int argc, char *argv[]);
extern int version_main(int argc, char *argv[]);
extern int x509_main(int argc, char *argv[]);

extern const OPTIONS asn1parse_options[];
extern const OPTIONS ca_options[];
extern
 const OPTIONS ciphers_options[];
extern const OPTIONS cmp_options[];
extern const OPTIONS cms_options[];
extern const OPTIONS crl_options[];
extern const OPTIONS crl2pkcs7_options[];
extern const OPTIONS dgst_options[];
extern const OPTIONS dhparam_options[];
extern const OPTIONS dsa_options[];
extern const OPTIONS dsaparam_options[];
extern const OPTIONS ec_options[];
extern const OPTIONS ecparam_options[];
```

```
extern const OPTIONS enc_options[];
extern const OPTIONS engine_options[];
extern const OPTIONS errstr_options[];
extern const OPTIONS fipsinstall_options[];
extern const OPTIONS gendsa_options[];
extern const OPTIONS genpkey_options[];
extern const OPTIONS genrsa_options[];
extern const OPTIONS help_options[];
extern const OPTIONS info_options[];
extern const OPTIONS kdf_options[];
extern const OPTIONS list_options[];
extern const OPTIONS mac_options[];
extern const OPTIONS nseq_options[];
extern const OPTIONS ocsp_options[];
extern const OPTIONS passwd_options[];
extern
 const OPTIONS pkcs12_options[];
extern const OPTIONS pkcs7_options[];
extern const OPTIONS pkcs8_options[];
extern const OPTIONS pkey_options[];
extern const OPTIONS pkeyparam_options[];
extern const OPTIONS pkeyutl_options[];
extern const OPTIONS prime_options[];
extern const OPTIONS rand_options[];
extern const OPTIONS rehash_options[];
extern const OPTIONS req_options[];
extern const OPTIONS rsa_options[];
extern const OPTIONS rsautl_options[];
extern const OPTIONS s_client_options[];
extern const OPTIONS s_server_options[];
extern const OPTIONS s_time_options[];
extern const OPTIONS sess_id_options[];
extern const OPTIONS smime_options[];
extern const OPTIONS speed_options[];
extern const OPTIONS spkac_options[];
extern const OPTIONS srp_options[];
extern const OPTIONS storeutl_options[];
extern const OPTIONS ts_options[];
extern const OPTIONS verify_options[];
extern const OPTIONS version_options[];
extern const OPTIONS x509_options[];

extern FUNCTION functions[];
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/bio.h.in
*
* Copyright 1995-2022 The OpenSSL Project Authors. All Rights Reserved.
```

```
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/


#ifndef OPENSSL_BIO_H
# define OPENSSL_BIO_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_BIO_H
# endif

# include <openssl/e_os2.h>

# ifndef OPENSSL_NO_STDIO
#  include <stdio.h>
# endif
# include <stdarg.h>

# include <openssl/crypto.h>
# include <openssl/bioerr.h>
# include <openssl/core.h>

#ifdef  __cplusplus
extern "C" {
#endif

/* There are the classes of BIOs */
# define BIO_TYPE_DESCRIPTOR     0x0100 /* socket, fd, connect or accept */
# define BIO_TYPE_FILTER         0x0200
# define BIO_TYPE_SOURCE_SINK    0x0400

/*
 These are the 'types' of BIOs */
# define BIO_TYPE_NONE            0
# define BIO_TYPE_MEM           ( 1|BIO_TYPE_SOURCE_SINK)
# define BIO_TYPE_FILE          ( 2|BIO_TYPE_SOURCE_SINK)

# define BIO_TYPE_FD            ( 4|BIO_TYPE_SOURCE_SINK|BIO_TYPE_DESCRIPTOR)
# define BIO_TYPE_SOCKET        ( 5|BIO_TYPE_SOURCE_SINK|BIO_TYPE_DESCRIPTOR)
# define BIO_TYPE_NULL          ( 6|BIO_TYPE_SOURCE_SINK)
# define BIO_TYPE_SSL           ( 7|BIO_TYPE_FILTER)
# define BIO_TYPE_MD            ( 8|BIO_TYPE_FILTER)
```

```
# define BIO_TYPE_BUFFER         ( 9|BIO_TYPE_FILTER)
# define BIO_TYPE_CIPHER         (10|BIO_TYPE_FILTER)
# define BIO_TYPE_BASE64         (11|BIO_TYPE_FILTER)
# define BIO_TYPE_CONNECT        (12|BIO_TYPE_SOURCE_SINK|BIO_TYPE_DESCRIPTOR)
# define BIO_TYPE_ACCEPT         (13|BIO_TYPE_SOURCE_SINK|BIO_TYPE_DESCRIPTOR)

# define BIO_TYPE_NBIO_TEST      (16|BIO_TYPE_FILTER)/* server proxy BIO */
# define BIO_TYPE_NULL_FILTER    (17|BIO_TYPE_FILTER)
# define BIO_TYPE_BIO
   (19|BIO_TYPE_SOURCE_SINK)/* half a BIO pair */
# define BIO_TYPE_LINEBUFFER     (20|BIO_TYPE_FILTER)
# define BIO_TYPE_DGRAM          (21|BIO_TYPE_SOURCE_SINK|BIO_TYPE_DESCRIPTOR)
# define BIO_TYPE_ASN1           (22|BIO_TYPE_FILTER)
# define BIO_TYPE_COMP           (23|BIO_TYPE_FILTER)
# ifndef OPENSSL_NO_SCTP
#  define BIO_TYPE_DGRAM_SCTP    (24|BIO_TYPE_SOURCE_SINK|BIO_TYPE_DESCRIPTOR)
# endif
# define BIO_TYPE_CORE_TO_PROV   (25|BIO_TYPE_SOURCE_SINK)

#define BIO_TYPE_START           128

/*
* BIO_FILENAME_READ|BIO_CLOSE to open or close on free.
* BIO_set_fp(in,stdin,BIO_NOCLOSE);
*/
# define BIO_NOCLOSE             0x00
# define BIO_CLOSE               0x01

/*
* These are used in the following macros and are passed to BIO_ctrl()
*/
# define BIO_CTRL_RESET          1/* opt - rewind/zero etc */
# define BIO_CTRL_EOF            2/* opt - are we at the eof */
# define BIO_CTRL_INFO           3/* opt - extra tit-bits */
# define BIO_CTRL_SET            4/* man - set the 'IO'
 type */
# define BIO_CTRL_GET            5/* man - get the 'IO' type */
# define BIO_CTRL_PUSH           6/* opt - internal, used to signify change */
# define BIO_CTRL_POP            7/* opt - internal, used to signify change */
# define BIO_CTRL_GET_CLOSE      8/* man - set the 'close' on free */
# define BIO_CTRL_SET_CLOSE      9/* man - set the 'close' on free */
# define BIO_CTRL_PENDING        10/* opt - is their more data buffered */
# define BIO_CTRL_FLUSH          11/* opt - 'flush' buffered output */
# define BIO_CTRL_DUP            12/* man - extra stuff for 'duped' BIO */
# define BIO_CTRL_WPENDING       13/* opt - number of bytes still to write */
# define BIO_CTRL_SET_CALLBACK   14/* opt - set callback function */
# define BIO_CTRL_GET_CALLBACK   15/* opt - set callback function */
```

```
# define BIO_CTRL_PEEK          29/* BIO_f_buffer special */
# define BIO_CTRL_SET_FILENAME   30/* BIO_s_file special */

/* dgram BIO stuff */
# define BIO_CTRL_DGRAM_CONNECT       31/* BIO
 dgram special */
# define BIO_CTRL_DGRAM_SET_CONNECTED 32/* allow for an externally connected
                                * socket to be passed in */
# define BIO_CTRL_DGRAM_SET_RECV_TIMEOUT 33/* setsockopt, essentially */
# define BIO_CTRL_DGRAM_GET_RECV_TIMEOUT 34/* getsockopt, essentially */
# define BIO_CTRL_DGRAM_SET_SEND_TIMEOUT 35/* setsockopt, essentially */
# define BIO_CTRL_DGRAM_GET_SEND_TIMEOUT 36/* getsockopt, essentially */

# define BIO_CTRL_DGRAM_GET_RECV_TIMER_EXP 37/* flag whether the last */
# define BIO_CTRL_DGRAM_GET_SEND_TIMER_EXP 38/* I/O operation timed out */

/* #ifdef IP_MTU_DISCOVER */
# define BIO_CTRL_DGRAM_MTU_DISCOVER       39/* set DF bit on egress packets */
/* #endif */

# define BIO_CTRL_DGRAM_QUERY_MTU         40/* as kernel for current MTU */
# define BIO_CTRL_DGRAM_GET_FALLBACK_MTU   47
# define BIO_CTRL_DGRAM_GET_MTU           41/* get cached value for MTU */
# define BIO_CTRL_DGRAM_SET_MTU           42/* set cached value for MTU.
                                 * want to use this if asking
                                * the kernel fails */

# define BIO_CTRL_DGRAM_MTU_EXCEEDED       43/* check whether the MTU was
                                * exceed in the previous write
                                * operation */

# define BIO_CTRL_DGRAM_GET_PEER          46
# define BIO_CTRL_DGRAM_SET_PEER          44/* Destination for the data */

# define BIO_CTRL_DGRAM_SET_NEXT_TIMEOUT   45/* Next DTLS handshake timeout
                                * to adjust socket timeouts */
# define BIO_CTRL_DGRAM_SET_DONT_FRAG      48

# define BIO_CTRL_DGRAM_GET_MTU_OVERHEAD   49

/* Deliberately outside of OPENSSL_NO_SCTP - used in bss_dgram.c */
#  define BIO_CTRL_DGRAM_SCTP_SET_IN_HANDSHAKE    50
# ifndef OPENSSL_NO_SCTP
/* SCTP stuff */
#  define BIO_CTRL_DGRAM_SCTP_ADD_AUTH_KEY              51
#  define BIO_CTRL_DGRAM_SCTP_NEXT_AUTH_KEY
        52
#  define BIO_CTRL_DGRAM_SCTP_AUTH_CCS_RCVD             53
```

```
#  define BIO_CTRL_DGRAM_SCTP_GET_SNDINFO        60
#  define BIO_CTRL_DGRAM_SCTP_SET_SNDINFO        61
#  define BIO_CTRL_DGRAM_SCTP_GET_RCVINFO        62
#  define BIO_CTRL_DGRAM_SCTP_SET_RCVINFO        63
#  define BIO_CTRL_DGRAM_SCTP_GET_PRINFO              64
#  define BIO_CTRL_DGRAM_SCTP_SET_PRINFO              65
#  define BIO_CTRL_DGRAM_SCTP_SAVE_SHUTDOWN           70
# endif

# define BIO_CTRL_DGRAM_SET_PEEK_MODE      71

/*
* internal BIO:
* # define BIO_CTRL_SET_KTLS_SEND               72
* # define BIO_CTRL_SET_KTLS_SEND_CTRL_MSG       74
* # define BIO_CTRL_CLEAR_KTLS_CTRL_MSG          75
*/

# define BIO_CTRL_GET_KTLS_SEND               73
# define BIO_CTRL_GET_KTLS_RECV               76

# define BIO_CTRL_DGRAM_SCTP_WAIT_FOR_DRY      77
# define BIO_CTRL_DGRAM_SCTP_MSG_WAITING       78

/* BIO_f_prefix controls */
# define BIO_CTRL_SET_PREFIX                  79
# define
 BIO_CTRL_SET_INDENT                 80
# define BIO_CTRL_GET_INDENT                  81

# ifndef OPENSSL_NO_KTLS
#  define BIO_get_ktls_send(b)        \
   (BIO_ctrl(b, BIO_CTRL_GET_KTLS_SEND, 0, NULL) > 0)
#  define BIO_get_ktls_recv(b)        \
   (BIO_ctrl(b, BIO_CTRL_GET_KTLS_RECV, 0, NULL) > 0)
# else
#  define BIO_get_ktls_send(b)  (0)
#  define BIO_get_ktls_recv(b)  (0)
# endif

/* modifiers */
# define BIO_FP_READ            0x02
# define BIO_FP_WRITE           0x04
# define BIO_FP_APPEND          0x08
# define BIO_FP_TEXT            0x10

# define BIO_FLAGS_READ         0x01
# define BIO_FLAGS_WRITE        0x02
```

```
# define BIO_FLAGS_IO_SPECIAL    0x04
# define BIO_FLAGS_RWS (BIO_FLAGS_READ|BIO_FLAGS_WRITE|BIO_FLAGS_IO_SPECIAL)
# define BIO_FLAGS_SHOULD_RETRY  0x08
# ifndef OPENSSL_NO_DEPRECATED_3_0
/* This #define was replaced by an internal constant and should not be used. */
#  define BIO_FLAGS_UPLINK       0
# endif

# define BIO_FLAGS_BASE64_NO_NL  0x100

/*
 * This is used with memory BIOs:
* BIO_FLAGS_MEM_RDONLY means we shouldn't free up or change the data in any way;
* BIO_FLAGS_NONCLEAR_RST means we shouldn't clear data on reset.
*/
# define BIO_FLAGS_MEM_RDONLY    0x200
# define BIO_FLAGS_NONCLEAR_RST  0x400
# define BIO_FLAGS_IN_EOF        0x800

/* the BIO FLAGS values 0x1000 to 0x4000 are reserved for internal KTLS flags */

typedef union bio_addr_st BIO_ADDR;
typedef struct bio_addrinfo_st BIO_ADDRINFO;

int BIO_get_new_index(void);
void BIO_set_flags(BIO *b, int flags);
int BIO_test_flags(const BIO *b, int flags);
void BIO_clear_flags(BIO *b, int flags);

# define BIO_get_flags(b) BIO_test_flags(b, ~(0x0))
# define BIO_set_retry_special(b) \
            BIO_set_flags(b, (BIO_FLAGS_IO_SPECIAL|BIO_FLAGS_SHOULD_RETRY))
# define BIO_set_retry_read(b) \
            BIO_set_flags(b, (BIO_FLAGS_READ|BIO_FLAGS_SHOULD_RETRY))
# define BIO_set_retry_write(b) \
            BIO_set_flags(b, (BIO_FLAGS_WRITE|BIO_FLAGS_SHOULD_RETRY))

/*
 These are normally used internally in BIOs */
# define BIO_clear_retry_flags(b) \
            BIO_clear_flags(b, (BIO_FLAGS_RWS|BIO_FLAGS_SHOULD_RETRY))
# define BIO_get_retry_flags(b) \
            BIO_test_flags(b, (BIO_FLAGS_RWS|BIO_FLAGS_SHOULD_RETRY))

/* These should be used by the application to tell why we should retry */
# define BIO_should_read(a)              BIO_test_flags(a, BIO_FLAGS_READ)
# define BIO_should_write(a)             BIO_test_flags(a, BIO_FLAGS_WRITE)
# define BIO_should_io_special(a)        BIO_test_flags(a, BIO_FLAGS_IO_SPECIAL)
```

```
# define BIO_retry_type(a)              BIO_test_flags(a, BIO_FLAGS_RWS)
# define BIO_should_retry(a)            BIO_test_flags(a, BIO_FLAGS_SHOULD_RETRY)

/*
* The next three are used in conjunction with the BIO_should_io_special()
* condition.  After this returns true, BIO *BIO_get_retry_BIO(BIO *bio, int
* *reason); will walk the BIO stack and return the 'reason' for the special
* and the offending
 BIO. Given a BIO, BIO_get_retry_reason(bio) will return
* the code.
*/
/*
* Returned from the SSL bio when the certificate retrieval code had an error
*/
# define BIO_RR_SSL_X509_LOOKUP          0x01
/* Returned from the connect BIO when a connect would have blocked */
# define BIO_RR_CONNECT                  0x02
/* Returned from the accept BIO when an accept would have blocked */
# define BIO_RR_ACCEPT                   0x03

/* These are passed by the BIO callback */
# define BIO_CB_FREE     0x01
# define BIO_CB_READ     0x02
# define BIO_CB_WRITE    0x03
# define BIO_CB_PUTS     0x04
# define BIO_CB_GETS     0x05
# define BIO_CB_CTRL     0x06

/*
* The callback is called before and after the underling operation, The
* BIO_CB_RETURN flag indicates if it is after the call
*/
# define BIO_CB_RETURN   0x80
# define BIO_CB_return(a) ((a)|BIO_CB_RETURN)
# define BIO_cb_pre(a)   (!((a)&BIO_CB_RETURN))
# define BIO_cb_post(a)  ((a)&BIO_CB_RETURN)

# ifndef OPENSSL_NO_DEPRECATED_3_0
typedef
 long (*BIO_callback_fn)(BIO *b, int oper, const char *argp, int argi,
                         long argl, long ret);
OSSL_DEPRECATEDIN_3_0 BIO_callback_fn BIO_get_callback(const BIO *b);
OSSL_DEPRECATEDIN_3_0 void BIO_set_callback(BIO *b, BIO_callback_fn callback);
OSSL_DEPRECATEDIN_3_0 long BIO_debug_callback(BIO *bio, int cmd,
                                      const char *argp, int argi,
                                      long argl, long ret);
# endif
```

```
typedef long (*BIO_callback_fn_ex)(BIO *b, int oper, const char *argp,
                                   size_t len, int argi,
                                   long argl, int ret, size_t *processed);
BIO_callback_fn_ex BIO_get_callback_ex(const BIO *b);
void BIO_set_callback_ex(BIO *b, BIO_callback_fn_ex callback);
long BIO_debug_callback_ex(BIO *bio, int oper, const char *argp, size_t len,
                           int argi, long argl, int ret, size_t *processed);

char *BIO_get_callback_arg(const
 BIO *b);
void BIO_set_callback_arg(BIO *b, char *arg);

typedef struct bio_method_st BIO_METHOD;

const char *BIO_method_name(const BIO *b);
int BIO_method_type(const BIO *b);

typedef int BIO_info_cb(BIO *, int, int);
typedef BIO_info_cb bio_info_cb;  /* backward compatibility */

SKM_DEFINE_STACK_OF_INTERNAL(BIO, BIO, BIO)
#define sk_BIO_num(sk) OPENSSL_sk_num(ossl_check_const_BIO_sk_type(sk))
#define sk_BIO_value(sk, idx) ((BIO *)OPENSSL_sk_value(ossl_check_const_BIO_sk_type(sk), (idx)))
#define sk_BIO_new(cmp) ((STACK_OF(BIO) *)OPENSSL_sk_new(ossl_check_BIO_compfunc_type(cmp)))
#define sk_BIO_new_null() ((STACK_OF(BIO) *)OPENSSL_sk_new_null())
#define sk_BIO_new_reserve(cmp, n) ((STACK_OF(BIO)
*)OPENSSL_sk_new_reserve(ossl_check_BIO_compfunc_type(cmp), (n)))
#define sk_BIO_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_BIO_sk_type(sk), (n))
#define sk_BIO_free(sk) OPENSSL_sk_free(ossl_check_BIO_sk_type(sk))
#define sk_BIO_zero(sk) OPENSSL_sk_zero(ossl_check_BIO_sk_type(sk))
#define
 sk_BIO_delete(sk, i) ((BIO *)OPENSSL_sk_delete(ossl_check_BIO_sk_type(sk), (i)))
#define sk_BIO_delete_ptr(sk, ptr) ((BIO *)OPENSSL_sk_delete_ptr(ossl_check_BIO_sk_type(sk),
ossl_check_BIO_type(ptr)))
#define sk_BIO_push(sk, ptr) OPENSSL_sk_push(ossl_check_BIO_sk_type(sk), ossl_check_BIO_type(ptr))
#define sk_BIO_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_BIO_sk_type(sk), ossl_check_BIO_type(ptr))
#define sk_BIO_pop(sk) ((BIO *)OPENSSL_sk_pop(ossl_check_BIO_sk_type(sk)))
#define sk_BIO_shift(sk) ((BIO *)OPENSSL_sk_shift(ossl_check_BIO_sk_type(sk)))
#define sk_BIO_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_BIO_sk_type(sk),ossl_check_BIO_freefunc_type(freefunc))
#define sk_BIO_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_BIO_sk_type(sk), ossl_check_BIO_type(ptr),
(idx))
#define sk_BIO_set(sk, idx, ptr) ((BIO *)OPENSSL_sk_set(ossl_check_BIO_sk_type(sk), (idx),
ossl_check_BIO_type(ptr)))
#define sk_BIO_find(sk, ptr) OPENSSL_sk_find(ossl_check_BIO_sk_type(sk), ossl_check_BIO_type(ptr))
#define
 sk_BIO_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_BIO_sk_type(sk), ossl_check_BIO_type(ptr))
#define sk_BIO_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_BIO_sk_type(sk),
```

```
ossl_check_BIO_type(ptr), pnum)
#define sk_BIO_sort(sk) OPENSSL_sk_sort(ossl_check_BIO_sk_type(sk))
#define sk_BIO_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_BIO_sk_type(sk))
#define sk_BIO_dup(sk) ((STACK_OF(BIO) *)OPENSSL_sk_dup(ossl_check_const_BIO_sk_type(sk)))
#define sk_BIO_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(BIO)
*)OPENSSL_sk_deep_copy(ossl_check_const_BIO_sk_type(sk), ossl_check_BIO_copyfunc_type(copyfunc),
ossl_check_BIO_freefunc_type(freefunc)))
#define sk_BIO_set_cmp_func(sk, cmp)
((sk_BIO_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_BIO_sk_type(sk),
ossl_check_BIO_compfunc_type(cmp)))



/* Prefix and suffix callback in ASN1 BIO */
typedef int asn1_ps_func (BIO *b, unsigned char **pbuf, int *plen,
                          void *parg);

typedef void
 (*BIO_dgram_sctp_notification_handler_fn) (BIO *b,
                                            void *context,
                                            void *buf);
# ifndef OPENSSL_NO_SCTP
/* SCTP parameter structs */
struct bio_dgram_sctp_sndinfo {
  uint16_t snd_sid;
  uint16_t snd_flags;
  uint32_t snd_ppid;
  uint32_t snd_context;
};

struct bio_dgram_sctp_rcvinfo {
  uint16_t rcv_sid;
  uint16_t rcv_ssn;
  uint16_t rcv_flags;
  uint32_t rcv_ppid;
  uint32_t rcv_tsn;
  uint32_t rcv_cumtsn;
  uint32_t rcv_context;
};

struct bio_dgram_sctp_prinfo {
  uint16_t pr_policy;
  uint32_t pr_value;
};
# endif

/*
* #define BIO_CONN_get_param_hostname BIO_ctrl
```

```
*/

# define BIO_C_SET_CONNECT                       100
# define BIO_C_DO_STATE_MACHINE                  101
# define BIO_C_SET_NBIO                          102
/* # define BIO_C_SET_PROXY_PARAM                 103 */
# define BIO_C_SET_FD                            104
# define
 BIO_C_GET_FD                           105
# define BIO_C_SET_FILE_PTR                      106
# define BIO_C_GET_FILE_PTR                      107
# define BIO_C_SET_FILENAME                      108
# define BIO_C_SET_SSL                           109
# define BIO_C_GET_SSL                           110
# define BIO_C_SET_MD                            111
# define BIO_C_GET_MD                            112
# define BIO_C_GET_CIPHER_STATUS                 113
# define BIO_C_SET_BUF_MEM                       114
# define BIO_C_GET_BUF_MEM_PTR                   115
# define BIO_C_GET_BUFF_NUM_LINES                116
# define BIO_C_SET_BUFF_SIZE                     117
# define BIO_C_SET_ACCEPT                        118
# define BIO_C_SSL_MODE                          119
# define BIO_C_GET_MD_CTX                        120
/* # define BIO_C_GET_PROXY_PARAM                 121 */
# define BIO_C_SET_BUFF_READ_DATA                122/* data to read first */
# define BIO_C_GET_CONNECT
                 123
# define BIO_C_GET_ACCEPT                        124
# define BIO_C_SET_SSL_RENEGOTIATE_BYTES         125
# define BIO_C_GET_SSL_NUM_RENEGOTIATES          126
# define BIO_C_SET_SSL_RENEGOTIATE_TIMEOUT       127
# define BIO_C_FILE_SEEK                         128
# define BIO_C_GET_CIPHER_CTX                    129
# define BIO_C_SET_BUF_MEM_EOF_RETURN            130/* return end of input
                                     * value */
# define BIO_C_SET_BIND_MODE                     131
# define BIO_C_GET_BIND_MODE                     132
# define BIO_C_FILE_TELL                         133
# define BIO_C_GET_SOCKS                         134
# define BIO_C_SET_SOCKS                         135

# define BIO_C_SET_WRITE_BUF_SIZE                136/* for BIO_s_bio */
# define BIO_C_GET_WRITE_BUF_SIZE                137
# define BIO_C_MAKE_BIO_PAIR                     138
# define BIO_C_DESTROY_BIO_PAIR                  139
# define BIO_C_GET_WRITE_GUARANTEE
```

```
            140
# define BIO_C_GET_READ_REQUEST                141
# define BIO_C_SHUTDOWN_WR                     142
# define BIO_C_NREAD0                          143
# define BIO_C_NREAD                           144
# define BIO_C_NWRITE0                         145
# define BIO_C_NWRITE                          146
# define BIO_C_RESET_READ_REQUEST              147
# define BIO_C_SET_MD_CTX                      148

# define BIO_C_SET_PREFIX                      149
# define BIO_C_GET_PREFIX                      150
# define BIO_C_SET_SUFFIX                      151
# define BIO_C_GET_SUFFIX                      152

# define BIO_C_SET_EX_ARG                      153
# define BIO_C_GET_EX_ARG                      154

# define BIO_C_SET_CONNECT_MODE                155

# define BIO_set_app_data(s,arg)         BIO_set_ex_data(s,0,arg)
# define BIO_get_app_data(s)             BIO_get_ex_data(s,0)

# define BIO_set_nbio(b,n)
     BIO_ctrl(b,BIO_C_SET_NBIO,(n),NULL)

# ifndef OPENSSL_NO_SOCK
/* IP families we support, for BIO_s_connect() and BIO_s_accept() */
/* Note: the underlying operating system may not support some of them */
#  define BIO_FAMILY_IPV4                      4
#  define BIO_FAMILY_IPV6                      6
#  define BIO_FAMILY_IPANY                     256

/* BIO_s_connect() */
#  define BIO_set_conn_hostname(b,name) BIO_ctrl(b,BIO_C_SET_CONNECT,0, \
                                (char *)(name))
#  define BIO_set_conn_port(b,port)     BIO_ctrl(b,BIO_C_SET_CONNECT,1, \
                                (char *)(port))
#  define BIO_set_conn_address(b,addr)  BIO_ctrl(b,BIO_C_SET_CONNECT,2, \
                                (char *)(addr))
#  define BIO_set_conn_ip_family(b,f)   BIO_int_ctrl(b,BIO_C_SET_CONNECT,3,f)
#  define BIO_get_conn_hostname(b)      ((const char *)BIO_ptr_ctrl(b,BIO_C_GET_CONNECT,0))
#  define BIO_get_conn_port(b)
       ((const char *)BIO_ptr_ctrl(b,BIO_C_GET_CONNECT,1))
#  define BIO_get_conn_address(b)       ((const BIO_ADDR *)BIO_ptr_ctrl(b,BIO_C_GET_CONNECT,2))
#  define BIO_get_conn_ip_family(b)     BIO_ctrl(b,BIO_C_GET_CONNECT,3,NULL)
#  define BIO_set_conn_mode(b,n)        BIO_ctrl(b,BIO_C_SET_CONNECT_MODE,(n),NULL)
```

```
/* BIO_s_accept() */
#  define BIO_set_accept_name(b,name)   BIO_ctrl(b,BIO_C_SET_ACCEPT,0, \
                                (char *)(name))
#  define BIO_set_accept_port(b,port)   BIO_ctrl(b,BIO_C_SET_ACCEPT,1, \
                                (char *)(port))
#  define BIO_get_accept_name(b)        ((const char *)BIO_ptr_ctrl(b,BIO_C_GET_ACCEPT,0))
#  define BIO_get_accept_port(b)        ((const char *)BIO_ptr_ctrl(b,BIO_C_GET_ACCEPT,1))
#  define BIO_get_peer_name(b)          ((const char *)BIO_ptr_ctrl(b,BIO_C_GET_ACCEPT,2))
#  define BIO_get_peer_port(b)          ((const char *)BIO_ptr_ctrl(b,BIO_C_GET_ACCEPT,3))
/* #define
 BIO_set_nbio(b,n)    BIO_ctrl(b,BIO_C_SET_NBIO,(n),NULL) */
#  define BIO_set_nbio_accept(b,n)      BIO_ctrl(b,BIO_C_SET_ACCEPT,2,(n)?(void *)"a":NULL)
#  define BIO_set_accept_bios(b,bio)    BIO_ctrl(b,BIO_C_SET_ACCEPT,3, \
                                (char *)(bio))
#  define BIO_set_accept_ip_family(b,f) BIO_int_ctrl(b,BIO_C_SET_ACCEPT,4,f)
#  define BIO_get_accept_ip_family(b)   BIO_ctrl(b,BIO_C_GET_ACCEPT,4,NULL)

/* Aliases kept for backward compatibility */
#  define BIO_BIND_NORMAL                 0
#  define BIO_BIND_REUSEADDR              BIO_SOCK_REUSEADDR
#  define BIO_BIND_REUSEADDR_IF_UNUSED    BIO_SOCK_REUSEADDR
#  define BIO_set_bind_mode(b,mode) BIO_ctrl(b,BIO_C_SET_BIND_MODE,mode,NULL)
#  define BIO_get_bind_mode(b)    BIO_ctrl(b,BIO_C_GET_BIND_MODE,0,NULL)
# endif /* OPENSSL_NO_SOCK */

# define BIO_do_connect(b)       BIO_do_handshake(b)
# define BIO_do_accept(b)        BIO_do_handshake(b)

# define BIO_do_handshake(b)     BIO_ctrl(b,BIO_C_DO_STATE_MACHINE,0,NULL)

/*
 BIO_s_datagram(), BIO_s_fd(), BIO_s_socket(), BIO_s_accept() and BIO_s_connect() */
# define BIO_set_fd(b,fd,c)      BIO_int_ctrl(b,BIO_C_SET_FD,c,fd)
# define BIO_get_fd(b,c)         BIO_ctrl(b,BIO_C_GET_FD,0,(char *)(c))

/* BIO_s_file() */
# define BIO_set_fp(b,fp,c)      BIO_ctrl(b,BIO_C_SET_FILE_PTR,c,(char *)(fp))
# define BIO_get_fp(b,fpp)       BIO_ctrl(b,BIO_C_GET_FILE_PTR,0,(char *)(fpp))

/* BIO_s_fd() and BIO_s_file() */
# define BIO_seek(b,ofs) (int)BIO_ctrl(b,BIO_C_FILE_SEEK,ofs,NULL)
# define BIO_tell(b)     (int)BIO_ctrl(b,BIO_C_FILE_TELL,0,NULL)

/*
* name is cast to lose const, but might be better to route through a
* function so we can do it safely
*/
# ifdef CONST_STRICT
```

```
/*
* If you are wondering why this isn't defined, its because CONST_STRICT is
* purely a compile-time kludge to allow const to be checked.
*/
int BIO_read_filename(BIO *b, const char *name);
# else
#  define BIO_read_filename(b,name) (int)BIO_ctrl(b,BIO_C_SET_FILENAME,
 \
            BIO_CLOSE|BIO_FP_READ,(char *)(name))
# endif
# define BIO_write_filename(b,name) (int)BIO_ctrl(b,BIO_C_SET_FILENAME, \
            BIO_CLOSE|BIO_FP_WRITE,name)
# define BIO_append_filename(b,name) (int)BIO_ctrl(b,BIO_C_SET_FILENAME, \
            BIO_CLOSE|BIO_FP_APPEND,name)
# define BIO_rw_filename(b,name) (int)BIO_ctrl(b,BIO_C_SET_FILENAME, \
            BIO_CLOSE|BIO_FP_READ|BIO_FP_WRITE,name)

/*
* WARNING WARNING, this ups the reference count on the read bio of the SSL
* structure.  This is because the ssl read BIO is now pointed to by the
* next_bio field in the bio.  So when you free the BIO, make sure you are
* doing a BIO_free_all() to catch the underlying BIO.
*/
# define BIO_set_ssl(b,ssl,c)    BIO_ctrl(b,BIO_C_SET_SSL,c,(char *)(ssl))
# define BIO_get_ssl(b,sslp)     BIO_ctrl(b,BIO_C_GET_SSL,0,(char *)(sslp))
# define BIO_set_ssl_mode(b,client)      BIO_ctrl(b,BIO_C_SSL_MODE,client,NULL)
# define BIO_set_ssl_renegotiate_bytes(b,num) \

      BIO_ctrl(b,BIO_C_SET_SSL_RENEGOTIATE_BYTES,num,NULL)
# define BIO_get_num_renegotiates(b) \
      BIO_ctrl(b,BIO_C_GET_SSL_NUM_RENEGOTIATES,0,NULL)
# define BIO_set_ssl_renegotiate_timeout(b,seconds) \
      BIO_ctrl(b,BIO_C_SET_SSL_RENEGOTIATE_TIMEOUT,seconds,NULL)

/* defined in evp.h */
/* #define BIO_set_md(b,md)     BIO_ctrl(b,BIO_C_SET_MD,1,(char *)(md)) */

# define BIO_get_mem_data(b,pp)  BIO_ctrl(b,BIO_CTRL_INFO,0,(char *)(pp))
# define BIO_set_mem_buf(b,bm,c) BIO_ctrl(b,BIO_C_SET_BUF_MEM,c,(char *)(bm))
# define BIO_get_mem_ptr(b,pp)   BIO_ctrl(b,BIO_C_GET_BUF_MEM_PTR,0, \
                                 (char *)(pp))
# define BIO_set_mem_eof_return(b,v) \
                        BIO_ctrl(b,BIO_C_SET_BUF_MEM_EOF_RETURN,v,NULL)

/* For the BIO_f_buffer() type */
# define BIO_get_buffer_num_lines(b)     BIO_ctrl(b,BIO_C_GET_BUFF_NUM_LINES,0,NULL)
# define BIO_set_buffer_size(b,size)     BIO_ctrl(b,BIO_C_SET_BUFF_SIZE,size,NULL)
# define BIO_set_read_buffer_size(b,size)
```

```
 BIO_int_ctrl(b,BIO_C_SET_BUFF_SIZE,size,0)
# define BIO_set_write_buffer_size(b,size) BIO_int_ctrl(b,BIO_C_SET_BUFF_SIZE,size,1)
# define BIO_set_buffer_read_data(b,buf,num) BIO_ctrl(b,BIO_C_SET_BUFF_READ_DATA,num,buf)

/* Don't use the next one unless you know what you are doing :-) */
# define BIO_dup_state(b,ret)    BIO_ctrl(b,BIO_CTRL_DUP,0,(char *)(ret))

# define BIO_reset(b)           (int)BIO_ctrl(b,BIO_CTRL_RESET,0,NULL)
# define BIO_eof(b)             (int)BIO_ctrl(b,BIO_CTRL_EOF,0,NULL)
# define BIO_set_close(b,c)      (int)BIO_ctrl(b,BIO_CTRL_SET_CLOSE,(c),NULL)
# define BIO_get_close(b)        (int)BIO_ctrl(b,BIO_CTRL_GET_CLOSE,0,NULL)
# define BIO_pending(b)          (int)BIO_ctrl(b,BIO_CTRL_PENDING,0,NULL)
# define BIO_wpending(b)         (int)BIO_ctrl(b,BIO_CTRL_WPENDING,0,NULL)
/* ...pending macros have inappropriate return type */
size_t BIO_ctrl_pending(BIO *b);
size_t BIO_ctrl_wpending(BIO *b);
# define BIO_flush(b)           (int)BIO_ctrl(b,BIO_CTRL_FLUSH,0,NULL)
#
 define BIO_get_info_callback(b,cbp) (int)BIO_ctrl(b,BIO_CTRL_GET_CALLBACK,0, \
                                    cbp)
# define BIO_set_info_callback(b,cb) (int)BIO_callback_ctrl(b,BIO_CTRL_SET_CALLBACK,cb)

/* For the BIO_f_buffer() type */
# define BIO_buffer_get_num_lines(b) BIO_ctrl(b,BIO_CTRL_GET,0,NULL)
# define BIO_buffer_peek(b,s,l) BIO_ctrl(b,BIO_CTRL_PEEK,(l),(s))

/* For BIO_s_bio() */
# define BIO_set_write_buf_size(b,size) (int)BIO_ctrl(b,BIO_C_SET_WRITE_BUF_SIZE,size,NULL)
# define BIO_get_write_buf_size(b,size) (size_t)BIO_ctrl(b,BIO_C_GET_WRITE_BUF_SIZE,size,NULL)
# define BIO_make_bio_pair(b1,b2)   (int)BIO_ctrl(b1,BIO_C_MAKE_BIO_PAIR,0,b2)
# define BIO_destroy_bio_pair(b)    (int)BIO_ctrl(b,BIO_C_DESTROY_BIO_PAIR,0,NULL)
# define BIO_shutdown_wr(b) (int)BIO_ctrl(b, BIO_C_SHUTDOWN_WR, 0, NULL)
/* macros with inappropriate type -- but ...pending macros use int too: */
# define BIO_get_write_guarantee(b) (int)BIO_ctrl(b,BIO_C_GET_WRITE_GUARANTEE,0,NULL)
#
 define BIO_get_read_request(b)    (int)BIO_ctrl(b,BIO_C_GET_READ_REQUEST,0,NULL)
size_t BIO_ctrl_get_write_guarantee(BIO *b);
size_t BIO_ctrl_get_read_request(BIO *b);
int BIO_ctrl_reset_read_request(BIO *b);

/* ctrl macros for dgram */
# define BIO_ctrl_dgram_connect(b,peer)  \
                (int)BIO_ctrl(b,BIO_CTRL_DGRAM_CONNECT,0, (char *)(peer))
# define BIO_ctrl_set_connected(b,peer) \
      (int)BIO_ctrl(b, BIO_CTRL_DGRAM_SET_CONNECTED, 0, (char *)(peer))
# define BIO_dgram_recv_timedout(b) \
      (int)BIO_ctrl(b, BIO_CTRL_DGRAM_GET_RECV_TIMER_EXP, 0, NULL)
# define BIO_dgram_send_timedout(b) \
```

```
        (int)BIO_ctrl(b, BIO_CTRL_DGRAM_GET_SEND_TIMER_EXP, 0, NULL)
# define BIO_dgram_get_peer(b,peer) \
        (int)BIO_ctrl(b, BIO_CTRL_DGRAM_GET_PEER, 0, (char *)(peer))
# define BIO_dgram_set_peer(b,peer) \
        (int)BIO_ctrl(b, BIO_CTRL_DGRAM_SET_PEER, 0, (char *)(peer))
# define BIO_dgram_get_mtu_overhead(b) \
        (unsigned int)BIO_ctrl((b),
 BIO_CTRL_DGRAM_GET_MTU_OVERHEAD, 0, NULL)

/* ctrl macros for BIO_f_prefix */
# define BIO_set_prefix(b,p) BIO_ctrl((b), BIO_CTRL_SET_PREFIX, 0, (void *)(p))
# define BIO_set_indent(b,i) BIO_ctrl((b), BIO_CTRL_SET_INDENT, (i), NULL)
# define BIO_get_indent(b) BIO_ctrl((b), BIO_CTRL_GET_INDENT, 0, NULL)

#define BIO_get_ex_new_index(l, p, newf, dupf, freef) \
  CRYPTO_get_ex_new_index(CRYPTO_EX_INDEX_BIO, l, p, newf, dupf, freef)
int BIO_set_ex_data(BIO *bio, int idx, void *data);
void *BIO_get_ex_data(const BIO *bio, int idx);
uint64_t BIO_number_read(BIO *bio);
uint64_t BIO_number_written(BIO *bio);

/* For BIO_f_asn1() */
int BIO_asn1_set_prefix(BIO *b, asn1_ps_func *prefix,
                        asn1_ps_func *prefix_free);
int BIO_asn1_get_prefix(BIO *b, asn1_ps_func **pprefix,
                        asn1_ps_func **pprefix_free);
int BIO_asn1_set_suffix(BIO *b, asn1_ps_func *suffix,
                        asn1_ps_func *suffix_free);
int BIO_asn1_get_suffix(BIO *b,
 asn1_ps_func **psuffix,
                        asn1_ps_func **psuffix_free);

const BIO_METHOD *BIO_s_file(void);
BIO *BIO_new_file(const char *filename, const char *mode);
BIO *BIO_new_from_core_bio(OSSL_LIB_CTX *libctx, OSSL_CORE_BIO *corebio);
# ifndef OPENSSL_NO_STDIO
BIO *BIO_new_fp(FILE *stream, int close_flag);
# endif
BIO *BIO_new_ex(OSSL_LIB_CTX *libctx, const BIO_METHOD *method);
BIO *BIO_new(const BIO_METHOD *type);
int BIO_free(BIO *a);
void BIO_set_data(BIO *a, void *ptr);
void *BIO_get_data(BIO *a);
void BIO_set_init(BIO *a, int init);
int BIO_get_init(BIO *a);
void BIO_set_shutdown(BIO *a, int shut);
int BIO_get_shutdown(BIO *a);
void BIO_vfree(BIO *a);
```

```
int BIO_up_ref(BIO *a);
int BIO_read(BIO *b, void *data, int dlen);
int BIO_read_ex(BIO *b, void *data, size_t dlen, size_t *readbytes);
int BIO_gets(BIO *bp, char *buf, int size);
int BIO_get_line(BIO *bio, char *buf, int size);
int BIO_write(BIO *b, const void *data, int dlen);
int BIO_write_ex(BIO *b, const void *data,
 size_t dlen, size_t *written);
int BIO_puts(BIO *bp, const char *buf);
int BIO_indent(BIO *b, int indent, int max);
long BIO_ctrl(BIO *bp, int cmd, long larg, void *parg);
long BIO_callback_ctrl(BIO *b, int cmd, BIO_info_cb *fp);
void *BIO_ptr_ctrl(BIO *bp, int cmd, long larg);
long BIO_int_ctrl(BIO *bp, int cmd, long larg, int iarg);
BIO *BIO_push(BIO *b, BIO *append);
BIO *BIO_pop(BIO *b);
void BIO_free_all(BIO *a);
BIO *BIO_find_type(BIO *b, int bio_type);
BIO *BIO_next(BIO *b);
void BIO_set_next(BIO *b, BIO *next);
BIO *BIO_get_retry_BIO(BIO *bio, int *reason);
int BIO_get_retry_reason(BIO *bio);
void BIO_set_retry_reason(BIO *bio, int reason);
BIO *BIO_dup_chain(BIO *in);

int BIO_nread0(BIO *bio, char **buf);
int BIO_nread(BIO *bio, char **buf, int num);
int BIO_nwrite0(BIO *bio, char **buf);
int BIO_nwrite(BIO *bio, char **buf, int num);

const BIO_METHOD *BIO_s_mem(void);
const BIO_METHOD *BIO_s_secmem(void);
BIO *BIO_new_mem_buf(const void *buf, int len);
# ifndef OPENSSL_NO_SOCK
const
 BIO_METHOD *BIO_s_socket(void);
const BIO_METHOD *BIO_s_connect(void);
const BIO_METHOD *BIO_s_accept(void);
# endif
const BIO_METHOD *BIO_s_fd(void);
const BIO_METHOD *BIO_s_log(void);
const BIO_METHOD *BIO_s_bio(void);
const BIO_METHOD *BIO_s_null(void);
const BIO_METHOD *BIO_f_null(void);
const BIO_METHOD *BIO_f_buffer(void);
const BIO_METHOD *BIO_f_readbuffer(void);
const BIO_METHOD *BIO_f_linebuffer(void);
const BIO_METHOD *BIO_f_nbio_test(void);
```

```
const BIO_METHOD *BIO_f_prefix(void);
const BIO_METHOD *BIO_s_core(void);
# ifndef OPENSSL_NO_DGRAM
const BIO_METHOD *BIO_s_datagram(void);
int BIO_dgram_non_fatal_error(int error);
BIO *BIO_new_dgram(int fd, int close_flag);
#  ifndef OPENSSL_NO_SCTP
const BIO_METHOD *BIO_s_datagram_sctp(void);
BIO *BIO_new_dgram_sctp(int fd, int close_flag);
int BIO_dgram_is_sctp(BIO *bio);
int BIO_dgram_sctp_notification_cb(BIO *b,
            BIO_dgram_sctp_notification_handler_fn handle_notifications,
            void *context);
int
 BIO_dgram_sctp_wait_for_dry(BIO *b);
int BIO_dgram_sctp_msg_waiting(BIO *b);
#  endif
# endif

# ifndef OPENSSL_NO_SOCK
int BIO_sock_should_retry(int i);
int BIO_sock_non_fatal_error(int error);
int BIO_socket_wait(int fd, int for_read, time_t max_time);
# endif
int BIO_wait(BIO *bio, time_t max_time, unsigned int nap_milliseconds);
int BIO_do_connect_retry(BIO *bio, int timeout, int nap_milliseconds);

int BIO_fd_should_retry(int i);
int BIO_fd_non_fatal_error(int error);
int BIO_dump_cb(int (*cb) (const void *data, size_t len, void *u),
            void *u, const void *s, int len);
int BIO_dump_indent_cb(int (*cb) (const void *data, size_t len, void *u),
                void *u, const void *s, int len, int indent);
int BIO_dump(BIO *b, const void *bytes, int len);
int BIO_dump_indent(BIO *b, const void *bytes, int len, int indent);
# ifndef OPENSSL_NO_STDIO
int BIO_dump_fp(FILE *fp, const void *s, int len);
int BIO_dump_indent_fp(FILE *fp, const void *s, int len, int indent);
#
 endif
int BIO_hex_string(BIO *out, int indent, int width, const void *data,
               int datalen);

# ifndef OPENSSL_NO_SOCK
BIO_ADDR *BIO_ADDR_new(void);
int BIO_ADDR_rawmake(BIO_ADDR *ap, int family,
                const void *where, size_t wherelen, unsigned short port);
void BIO_ADDR_free(BIO_ADDR *);
```

```
void BIO_ADDR_clear(BIO_ADDR *ap);
int BIO_ADDR_family(const BIO_ADDR *ap);
int BIO_ADDR_rawaddress(const BIO_ADDR *ap, void *p, size_t *l);
unsigned short BIO_ADDR_rawport(const BIO_ADDR *ap);
char *BIO_ADDR_hostname_string(const BIO_ADDR *ap, int numeric);
char *BIO_ADDR_service_string(const BIO_ADDR *ap, int numeric);
char *BIO_ADDR_path_string(const BIO_ADDR *ap);

const BIO_ADDRINFO *BIO_ADDRINFO_next(const BIO_ADDRINFO *bai);
int BIO_ADDRINFO_family(const BIO_ADDRINFO *bai);
int BIO_ADDRINFO_socktype(const BIO_ADDRINFO *bai);
int BIO_ADDRINFO_protocol(const BIO_ADDRINFO *bai);
const BIO_ADDR *BIO_ADDRINFO_address(const BIO_ADDRINFO *bai);
void BIO_ADDRINFO_free(BIO_ADDRINFO
 *bai);

enum BIO_hostserv_priorities {
  BIO_PARSE_PRIO_HOST, BIO_PARSE_PRIO_SERV
};
int BIO_parse_hostserv(const char *hostserv, char **host, char **service,
                       enum BIO_hostserv_priorities hostserv_prio);
enum BIO_lookup_type {
  BIO_LOOKUP_CLIENT, BIO_LOOKUP_SERVER
};
int BIO_lookup(const char *host, const char *service,
               enum BIO_lookup_type lookup_type,
               int family, int socktype, BIO_ADDRINFO **res);
int BIO_lookup_ex(const char *host, const char *service,
                  int lookup_type, int family, int socktype, int protocol,
                  BIO_ADDRINFO **res);
int BIO_sock_error(int sock);
int BIO_socket_ioctl(int fd, long type, void *arg);
int BIO_socket_nbio(int fd, int mode);
int BIO_sock_init(void);
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
#  define BIO_sock_cleanup() while(0) continue
# endif
int BIO_set_tcp_ndelay(int sock, int turn_on);
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
OSSL_DEPRECATEDIN_1_1_0 struct
 hostent *BIO_gethostbyname(const char *name);
OSSL_DEPRECATEDIN_1_1_0 int BIO_get_port(const char *str, unsigned short *port_ptr);
OSSL_DEPRECATEDIN_1_1_0 int BIO_get_host_ip(const char *str, unsigned char *ip);
OSSL_DEPRECATEDIN_1_1_0 int BIO_get_accept_socket(char *host_port, int mode);
OSSL_DEPRECATEDIN_1_1_0 int BIO_accept(int sock, char **ip_port);
# endif

union BIO_sock_info_u {
```

```
  BIO_ADDR *addr;
};
enum BIO_sock_info_type {
  BIO_SOCK_INFO_ADDRESS
};
int BIO_sock_info(int sock,
                  enum BIO_sock_info_type type, union BIO_sock_info_u *info);

# define BIO_SOCK_REUSEADDR    0x01
# define BIO_SOCK_V6_ONLY      0x02
# define BIO_SOCK_KEEPALIVE    0x04
# define BIO_SOCK_NONBLOCK     0x08
# define BIO_SOCK_NODELAY      0x10

int BIO_socket(int domain, int socktype, int protocol, int options);
int BIO_connect(int sock, const BIO_ADDR *addr, int options);
int BIO_bind(int sock, const BIO_ADDR *addr, int options);
int BIO_listen(int sock, const BIO_ADDR *addr,
 int options);
int BIO_accept_ex(int accept_sock, BIO_ADDR *addr, int options);
int BIO_closesocket(int sock);

BIO *BIO_new_socket(int sock, int close_flag);
BIO *BIO_new_connect(const char *host_port);
BIO *BIO_new_accept(const char *host_port);
# endif /* OPENSSL_NO_SOCK*/

BIO *BIO_new_fd(int fd, int close_flag);

int BIO_new_bio_pair(BIO **bio1, size_t writebuf1,
                     BIO **bio2, size_t writebuf2);
/*
* If successful, returns 1 and in *bio1, *bio2 two BIO pair endpoints.
* Otherwise returns 0 and sets *bio1 and *bio2 to NULL. Size 0 uses default
* value.
*/

void BIO_copy_next_retry(BIO *b);

/*
* long BIO_ghbn_ctrl(int cmd,int iarg,char *parg);
*/

# define ossl_bio__attr__(x)
# if defined(__GNUC__) && defined(__STDC_VERSION__) \
  && !defined(__MINGW32__) && !defined(__MINGW64__) \
  && !defined(__APPLE__)
  /*
```

```
   * Because we support the 'z' modifier, which made its appearance in C99,
   * we can't use __attribute__ with pre C99 dialects.

 */
#  if __STDC_VERSION__ >= 199901L
#   undef ossl_bio__attr__
#   define ossl_bio__attr__ __attribute__
#   if __GNUC__*10 + __GNUC_MINOR__ >= 44
#    define ossl_bio__printf__ __gnu_printf__
#   else
#    define ossl_bio__printf__ __printf__
#   endif
#  endif
# endif
int BIO_printf(BIO *bio, const char *format, ...)
ossl_bio__attr__((__format__(ossl_bio__printf__, 2, 3)));
int BIO_vprintf(BIO *bio, const char *format, va_list args)
ossl_bio__attr__((__format__(ossl_bio__printf__, 2, 0)));
int BIO_snprintf(char *buf, size_t n, const char *format, ...)
ossl_bio__attr__((__format__(ossl_bio__printf__, 3, 4)));
int BIO_vsnprintf(char *buf, size_t n, const char *format, va_list args)
ossl_bio__attr__((__format__(ossl_bio__printf__, 3, 0)));
# undef ossl_bio__attr__
# undef ossl_bio__printf__


BIO_METHOD *BIO_meth_new(int type, const char *name);
void BIO_meth_free(BIO_METHOD *biom);
int (*BIO_meth_get_write(const BIO_METHOD *biom)) (BIO *, const char *, int);
int (*BIO_meth_get_write_ex(const
 BIO_METHOD *biom)) (BIO *, const char *, size_t,
                                    size_t *);
int BIO_meth_set_write(BIO_METHOD *biom,
                       int (*write) (BIO *, const char *, int));
int BIO_meth_set_write_ex(BIO_METHOD *biom,
                       int (*bwrite) (BIO *, const char *, size_t, size_t *));
int (*BIO_meth_get_read(const BIO_METHOD *biom)) (BIO *, char *, int);
int (*BIO_meth_get_read_ex(const BIO_METHOD *biom)) (BIO *, char *, size_t, size_t *);
int BIO_meth_set_read(BIO_METHOD *biom,
                      int (*read) (BIO *, char *, int));
int BIO_meth_set_read_ex(BIO_METHOD *biom,
                         int (*bread) (BIO *, char *, size_t, size_t *));
int (*BIO_meth_get_puts(const BIO_METHOD *biom)) (BIO *, const char *);
int BIO_meth_set_puts(BIO_METHOD *biom,
                      int (*puts) (BIO *, const char *));
int (*BIO_meth_get_gets(const BIO_METHOD *biom)) (BIO *, char *, int);
int BIO_meth_set_gets(BIO_METHOD *biom,
```

```
                int (*ossl_gets) (BIO *, char *, int));
long (*BIO_meth_get_ctrl(const BIO_METHOD *biom)) (BIO *, int, long, void *);
int BIO_meth_set_ctrl(BIO_METHOD *biom,
                long (*ctrl) (BIO *, int, long, void *));
int (*BIO_meth_get_create(const BIO_METHOD *bion)) (BIO *);
int BIO_meth_set_create(BIO_METHOD *biom, int (*create) (BIO *));
int (*BIO_meth_get_destroy(const BIO_METHOD *biom)) (BIO *);
int BIO_meth_set_destroy(BIO_METHOD *biom, int (*destroy) (BIO *));
long (*BIO_meth_get_callback_ctrl(const BIO_METHOD *biom))
                        (BIO *, int, BIO_info_cb *);
int BIO_meth_set_callback_ctrl(BIO_METHOD *biom,
                        long (*callback_ctrl) (BIO *, int,
                                BIO_info_cb *));

# ifdef  __cplusplus
}
# endif
#endif
```

The MIT License

Copyright (c) 2016 ngtcp2 contributors

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR
 IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

CC0 1.0 Universal

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer
exclusive Copyright and Related Rights (defined below) upon the creator and
subsequent owner(s) (each and all, an "owner") of an original work of

authorship and/or a database (each, a "Work").

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works ("Commons") that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For
these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the "Affirmer"), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be protected by copyright and related or neighboring rights ("Copyright and Related Rights"). Copyright and Related Rights include, but are not limited to, the following:

i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;

ii. moral rights retained by the original author(s) and/or performer(s);

iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;

iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;

v. rights protecting the extraction, dissemination, use and reuse of data in a Work;

vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and

vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes of action, whether now known
or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved
to the maximum extent permitted taking into account
Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive, irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and
in such case Affirmer hereby
affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims and causes of action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.

b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise,

including without limitation warranties of title, merchantability, fitness
for a particular purpose, non infringement, or the absence of latent or
other defects, accuracy, or the present or absence of errors, whether or not
discoverable, all to the greatest extent permissible under applicable law.

c. Affirmer disclaims responsibility for clearing rights of other
persons
that may apply to the Work or any use thereof, including without limitation
any person's Copyright and Related Rights in the Work. Further, Affirmer
disclaims responsibility for obtaining any necessary consents, permissions
or other rights required for any use of the Work.

d. Affirmer understands and acknowledges that Creative Commons is not a
party to this document and has no duty or obligation with respect to this
CC0 or use of the Work.

For more information, please see
<http://creativecommons.org/publicdomain/zero/1.0/>
Copyright 2021 The simdutf authors

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR
COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER
IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
console.log('ok');
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/srp.h.in
*
* Copyright 2004-2021 The OpenSSL Project Authors. All Rights Reserved.
* Copyright (c) 2004, EdelKey Project. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at

```
* https://www.openssl.org/source/license.html
*
* Originally written by Christophe Renou and Peter Sylvester,
* for the EdelKey project.
*/



#ifndef OPENSSL_SRP_H
# define OPENSSL_SRP_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_SRP_H
# endif

#include <openssl/opensslconf.h>

#ifndef OPENSSL_NO_SRP
# include <stdio.h>
# include <string.h>
# include <openssl/safestack.h>
# include <openssl/bn.h>
# include <openssl/crypto.h>

# ifdef  __cplusplus
extern "C" {
# endif

# ifndef OPENSSL_NO_DEPRECATED_3_0

typedef
 struct SRP_gN_cache_st {
   char *b64_bn;
   BIGNUM *bn;
} SRP_gN_cache;
SKM_DEFINE_STACK_OF_INTERNAL(SRP_gN_cache, SRP_gN_cache, SRP_gN_cache)
#define sk_SRP_gN_cache_num(sk) OPENSSL_sk_num(ossl_check_const_SRP_gN_cache_sk_type(sk))
#define sk_SRP_gN_cache_value(sk, idx) ((SRP_gN_cache
*)OPENSSL_sk_value(ossl_check_const_SRP_gN_cache_sk_type(sk), (idx)))
#define sk_SRP_gN_cache_new(cmp) ((STACK_OF(SRP_gN_cache)
*)OPENSSL_sk_new(ossl_check_SRP_gN_cache_compfunc_type(cmp)))
#define sk_SRP_gN_cache_new_null() ((STACK_OF(SRP_gN_cache) *)OPENSSL_sk_new_null())
#define sk_SRP_gN_cache_new_reserve(cmp, n) ((STACK_OF(SRP_gN_cache)
*)OPENSSL_sk_new_reserve(ossl_check_SRP_gN_cache_compfunc_type(cmp), (n)))
#define sk_SRP_gN_cache_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_SRP_gN_cache_sk_type(sk), (n))
#define sk_SRP_gN_cache_free(sk) OPENSSL_sk_free(ossl_check_SRP_gN_cache_sk_type(sk))
```

```
#define sk_SRP_gN_cache_zero(sk) OPENSSL_sk_zero(ossl_check_SRP_gN_cache_sk_type(sk))
#define sk_SRP_gN_cache_delete(sk,
 i) ((SRP_gN_cache *)OPENSSL_sk_delete(ossl_check_SRP_gN_cache_sk_type(sk), (i)))
#define sk_SRP_gN_cache_delete_ptr(sk, ptr) ((SRP_gN_cache
*)OPENSSL_sk_delete_ptr(ossl_check_SRP_gN_cache_sk_type(sk), ossl_check_SRP_gN_cache_type(ptr)))
#define sk_SRP_gN_cache_push(sk, ptr) OPENSSL_sk_push(ossl_check_SRP_gN_cache_sk_type(sk),
ossl_check_SRP_gN_cache_type(ptr))
#define sk_SRP_gN_cache_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_SRP_gN_cache_sk_type(sk),
ossl_check_SRP_gN_cache_type(ptr))
#define sk_SRP_gN_cache_pop(sk) ((SRP_gN_cache
*)OPENSSL_sk_pop(ossl_check_SRP_gN_cache_sk_type(sk)))
#define sk_SRP_gN_cache_shift(sk) ((SRP_gN_cache
*)OPENSSL_sk_shift(ossl_check_SRP_gN_cache_sk_type(sk)))
#define sk_SRP_gN_cache_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_SRP_gN_cache_sk_type(sk),ossl_check_SRP_gN_cache_freefunc_type(freefu
nc))
#define sk_SRP_gN_cache_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_SRP_gN_cache_sk_type(sk),
ossl_check_SRP_gN_cache_type(ptr),
 (idx))
#define sk_SRP_gN_cache_set(sk, idx, ptr) ((SRP_gN_cache
*)OPENSSL_sk_set(ossl_check_SRP_gN_cache_sk_type(sk), (idx), ossl_check_SRP_gN_cache_type(ptr)))
#define sk_SRP_gN_cache_find(sk, ptr) OPENSSL_sk_find(ossl_check_SRP_gN_cache_sk_type(sk),
ossl_check_SRP_gN_cache_type(ptr))
#define sk_SRP_gN_cache_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_SRP_gN_cache_sk_type(sk),
ossl_check_SRP_gN_cache_type(ptr))
#define sk_SRP_gN_cache_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_SRP_gN_cache_sk_type(sk), ossl_check_SRP_gN_cache_type(ptr), pnum)
#define sk_SRP_gN_cache_sort(sk) OPENSSL_sk_sort(ossl_check_SRP_gN_cache_sk_type(sk))
#define sk_SRP_gN_cache_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_SRP_gN_cache_sk_type(sk))
#define sk_SRP_gN_cache_dup(sk) ((STACK_OF(SRP_gN_cache)
*)OPENSSL_sk_dup(ossl_check_const_SRP_gN_cache_sk_type(sk)))
#define sk_SRP_gN_cache_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(SRP_gN_cache)
*)OPENSSL_sk_deep_copy(ossl_check_const_SRP_gN_cache_sk_type(sk),
 ossl_check_SRP_gN_cache_copyfunc_type(copyfunc), ossl_check_SRP_gN_cache_freefunc_type(freefunc)))
#define sk_SRP_gN_cache_set_cmp_func(sk, cmp)
((sk_SRP_gN_cache_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_SRP_gN_cache_sk_type(sk),
ossl_check_SRP_gN_cache_compfunc_type(cmp)))



typedef struct SRP_user_pwd_st {
  /* Owned by us. */
  char *id;
  BIGNUM *s;
  BIGNUM *v;
  /* Not owned by us. */
  const BIGNUM *g;
  const BIGNUM *N;
```

```
  /* Owned by us. */
  char *info;
} SRP_user_pwd;
SKM_DEFINE_STACK_OF_INTERNAL(SRP_user_pwd, SRP_user_pwd, SRP_user_pwd)
#define sk_SRP_user_pwd_num(sk) OPENSSL_sk_num(ossl_check_const_SRP_user_pwd_sk_type(sk))
#define sk_SRP_user_pwd_value(sk, idx) ((SRP_user_pwd
*)OPENSSL_sk_value(ossl_check_const_SRP_user_pwd_sk_type(sk), (idx)))
#define sk_SRP_user_pwd_new(cmp) ((STACK_OF(SRP_user_pwd)
*)OPENSSL_sk_new(ossl_check_SRP_user_pwd_compfunc_type(cmp)))
#define sk_SRP_user_pwd_new_null() ((STACK_OF(SRP_user_pwd)
 *)OPENSSL_sk_new_null())
#define sk_SRP_user_pwd_new_reserve(cmp, n) ((STACK_OF(SRP_user_pwd)
*)OPENSSL_sk_new_reserve(ossl_check_SRP_user_pwd_compfunc_type(cmp), (n)))
#define sk_SRP_user_pwd_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_SRP_user_pwd_sk_type(sk), (n))
#define sk_SRP_user_pwd_free(sk) OPENSSL_sk_free(ossl_check_SRP_user_pwd_sk_type(sk))
#define sk_SRP_user_pwd_zero(sk) OPENSSL_sk_zero(ossl_check_SRP_user_pwd_sk_type(sk))
#define sk_SRP_user_pwd_delete(sk, i) ((SRP_user_pwd
*)OPENSSL_sk_delete(ossl_check_SRP_user_pwd_sk_type(sk), (i)))
#define sk_SRP_user_pwd_delete_ptr(sk, ptr) ((SRP_user_pwd
*)OPENSSL_sk_delete_ptr(ossl_check_SRP_user_pwd_sk_type(sk), ossl_check_SRP_user_pwd_type(ptr)))
#define sk_SRP_user_pwd_push(sk, ptr) OPENSSL_sk_push(ossl_check_SRP_user_pwd_sk_type(sk),
ossl_check_SRP_user_pwd_type(ptr))
#define sk_SRP_user_pwd_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_SRP_user_pwd_sk_type(sk),
ossl_check_SRP_user_pwd_type(ptr))
#define sk_SRP_user_pwd_pop(sk)
 ((SRP_user_pwd *)OPENSSL_sk_pop(ossl_check_SRP_user_pwd_sk_type(sk)))
#define sk_SRP_user_pwd_shift(sk) ((SRP_user_pwd
*)OPENSSL_sk_shift(ossl_check_SRP_user_pwd_sk_type(sk)))
#define sk_SRP_user_pwd_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_SRP_user_pwd_sk_type(sk),ossl_check_SRP_user_pwd_freefunc_type(freefu
nc))
#define sk_SRP_user_pwd_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_SRP_user_pwd_sk_type(sk),
ossl_check_SRP_user_pwd_type(ptr), (idx))
#define sk_SRP_user_pwd_set(sk, idx, ptr) ((SRP_user_pwd
*)OPENSSL_sk_set(ossl_check_SRP_user_pwd_sk_type(sk), (idx), ossl_check_SRP_user_pwd_type(ptr)))
#define sk_SRP_user_pwd_find(sk, ptr) OPENSSL_sk_find(ossl_check_SRP_user_pwd_sk_type(sk),
ossl_check_SRP_user_pwd_type(ptr))
#define sk_SRP_user_pwd_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_SRP_user_pwd_sk_type(sk),
ossl_check_SRP_user_pwd_type(ptr))
#define sk_SRP_user_pwd_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_SRP_user_pwd_sk_type(sk),
ossl_check_SRP_user_pwd_type(ptr),
 pnum)
#define sk_SRP_user_pwd_sort(sk) OPENSSL_sk_sort(ossl_check_SRP_user_pwd_sk_type(sk))
#define sk_SRP_user_pwd_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_SRP_user_pwd_sk_type(sk))
#define sk_SRP_user_pwd_dup(sk) ((STACK_OF(SRP_user_pwd)
*)OPENSSL_sk_dup(ossl_check_const_SRP_user_pwd_sk_type(sk)))
#define sk_SRP_user_pwd_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(SRP_user_pwd)
*)OPENSSL_sk_deep_copy(ossl_check_const_SRP_user_pwd_sk_type(sk),
```

```
ossl_check_SRP_user_pwd_copyfunc_type(copyfunc), ossl_check_SRP_user_pwd_freefunc_type(freefunc)))
#define sk_SRP_user_pwd_set_cmp_func(sk, cmp)
((sk_SRP_user_pwd_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_SRP_user_pwd_sk_type(sk),
ossl_check_SRP_user_pwd_compfunc_type(cmp)))


OSSL_DEPRECATEDIN_3_0
SRP_user_pwd *SRP_user_pwd_new(void);
OSSL_DEPRECATEDIN_3_0
void SRP_user_pwd_free(SRP_user_pwd *user_pwd);

OSSL_DEPRECATEDIN_3_0
void SRP_user_pwd_set_gN(SRP_user_pwd *user_pwd, const BIGNUM *g,

         const BIGNUM *N);
OSSL_DEPRECATEDIN_3_0
int SRP_user_pwd_set1_ids(SRP_user_pwd *user_pwd, const char *id,
                    const char *info);
OSSL_DEPRECATEDIN_3_0
int SRP_user_pwd_set0_sv(SRP_user_pwd *user_pwd, BIGNUM *s, BIGNUM *v);

typedef struct SRP_VBASE_st {
  STACK_OF(SRP_user_pwd) *users_pwd;
  STACK_OF(SRP_gN_cache) *gN_cache;
/* to simulate a user */
  char *seed_key;
  const BIGNUM *default_g;
  const BIGNUM *default_N;
} SRP_VBASE;

/*
* Internal structure storing N and g pair
*/
typedef struct SRP_gN_st {
  char *id;
  const BIGNUM *g;
  const BIGNUM *N;
} SRP_gN;
SKM_DEFINE_STACK_OF_INTERNAL(SRP_gN, SRP_gN, SRP_gN)
#define sk_SRP_gN_num(sk) OPENSSL_sk_num(ossl_check_const_SRP_gN_sk_type(sk))
#define sk_SRP_gN_value(sk, idx) ((SRP_gN *)OPENSSL_sk_value(ossl_check_const_SRP_gN_sk_type(sk),
(idx)))
#define sk_SRP_gN_new(cmp) ((STACK_OF(SRP_gN)
*)OPENSSL_sk_new(ossl_check_SRP_gN_compfunc_type(cmp)))
#define sk_SRP_gN_new_null() ((STACK_OF(SRP_gN)
 *)OPENSSL_sk_new_null())
#define sk_SRP_gN_new_reserve(cmp, n) ((STACK_OF(SRP_gN)
*)OPENSSL_sk_new_reserve(ossl_check_SRP_gN_compfunc_type(cmp), (n)))
```

```
#define sk_SRP_gN_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_SRP_gN_sk_type(sk), (n))
#define sk_SRP_gN_free(sk) OPENSSL_sk_free(ossl_check_SRP_gN_sk_type(sk))
#define sk_SRP_gN_zero(sk) OPENSSL_sk_zero(ossl_check_SRP_gN_sk_type(sk))
#define sk_SRP_gN_delete(sk, i) ((SRP_gN *)OPENSSL_sk_delete(ossl_check_SRP_gN_sk_type(sk), (i)))
#define sk_SRP_gN_delete_ptr(sk, ptr) ((SRP_gN *)OPENSSL_sk_delete_ptr(ossl_check_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_type(ptr)))
#define sk_SRP_gN_push(sk, ptr) OPENSSL_sk_push(ossl_check_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_type(ptr))
#define sk_SRP_gN_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_type(ptr))
#define sk_SRP_gN_pop(sk) ((SRP_gN *)OPENSSL_sk_pop(ossl_check_SRP_gN_sk_type(sk)))
#define sk_SRP_gN_shift(sk) ((SRP_gN *)OPENSSL_sk_shift(ossl_check_SRP_gN_sk_type(sk)))
#define
 sk_SRP_gN_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_SRP_gN_sk_type(sk),ossl_check_SRP_gN_freefunc_type(freefunc))
#define sk_SRP_gN_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_type(ptr), (idx))
#define sk_SRP_gN_set(sk, idx, ptr) ((SRP_gN *)OPENSSL_sk_set(ossl_check_SRP_gN_sk_type(sk), (idx),
ossl_check_SRP_gN_type(ptr)))
#define sk_SRP_gN_find(sk, ptr) OPENSSL_sk_find(ossl_check_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_type(ptr))
#define sk_SRP_gN_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_type(ptr))
#define sk_SRP_gN_find_all(sk, ptr, pnum) OPENSSL_sk_find_all(ossl_check_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_type(ptr), pnum)
#define sk_SRP_gN_sort(sk) OPENSSL_sk_sort(ossl_check_SRP_gN_sk_type(sk))
#define sk_SRP_gN_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_SRP_gN_sk_type(sk))
#define sk_SRP_gN_dup(sk) ((STACK_OF(SRP_gN)
*)OPENSSL_sk_dup(ossl_check_const_SRP_gN_sk_type(sk)))
#define
 sk_SRP_gN_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(SRP_gN)
*)OPENSSL_sk_deep_copy(ossl_check_const_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_copyfunc_type(copyfunc), ossl_check_SRP_gN_freefunc_type(freefunc)))
#define sk_SRP_gN_set_cmp_func(sk, cmp)
((sk_SRP_gN_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_SRP_gN_sk_type(sk),
ossl_check_SRP_gN_compfunc_type(cmp)))



OSSL_DEPRECATEDIN_3_0
SRP_VBASE *SRP_VBASE_new(char *seed_key);
OSSL_DEPRECATEDIN_3_0
void SRP_VBASE_free(SRP_VBASE *vb);
OSSL_DEPRECATEDIN_3_0
int SRP_VBASE_init(SRP_VBASE *vb, char *verifier_file);

OSSL_DEPRECATEDIN_3_0
int SRP_VBASE_add0_user(SRP_VBASE *vb, SRP_user_pwd *user_pwd);
```

```
/* NOTE: unlike in SRP_VBASE_get_by_user, caller owns the returned pointer.*/
OSSL_DEPRECATEDIN_3_0
SRP_user_pwd *SRP_VBASE_get1_by_user(SRP_VBASE *vb, char *username);

OSSL_DEPRECATEDIN_3_0
char *SRP_create_verifier_ex(const char *user, const char *pass, char **salt,
                             char **verifier,
 const char *N, const char *g,
                             OSSL_LIB_CTX *libctx, const char *propq);
OSSL_DEPRECATEDIN_3_0
char *SRP_create_verifier(const char *user, const char *pass, char **salt,
                          char **verifier, const char *N, const char *g);
OSSL_DEPRECATEDIN_3_0
int SRP_create_verifier_BN_ex(const char *user, const char *pass, BIGNUM **salt,
                              BIGNUM **verifier, const BIGNUM *N,
                              const BIGNUM *g, OSSL_LIB_CTX *libctx,
                              const char *propq);
OSSL_DEPRECATEDIN_3_0
int SRP_create_verifier_BN(const char *user, const char *pass, BIGNUM **salt,
                           BIGNUM **verifier, const BIGNUM *N,
                           const BIGNUM *g);

#  define SRP_NO_ERROR 0
#  define SRP_ERR_VBASE_INCOMPLETE_FILE 1
#  define SRP_ERR_VBASE_BN_LIB 2
#  define SRP_ERR_OPEN_FILE 3
#  define SRP_ERR_MEMORY 4

#  define DB_srptype      0
#  define DB_srpverifier  1
#  define DB_srpsalt
     2
#  define DB_srpid        3
#  define DB_srpgN        4
#  define DB_srpinfo      5
#  undef  DB_NUMBER
#  define DB_NUMBER       6

#  define DB_SRP_INDEX    'I'
#  define DB_SRP_VALID    'V'
#  define DB_SRP_REVOKED  'R'
#  define DB_SRP_MODIF    'v'

/* see srp.c */
OSSL_DEPRECATEDIN_3_0
char *SRP_check_known_gN_param(const BIGNUM *g, const BIGNUM *N);
OSSL_DEPRECATEDIN_3_0
```

```
SRP_gN *SRP_get_default_gN(const char *id);

/* server side .... */
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_server_key(const BIGNUM *A, const BIGNUM *v, const BIGNUM *u,
                    const BIGNUM *b, const BIGNUM *N);
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_B_ex(const BIGNUM *b, const BIGNUM *N, const BIGNUM *g,
                const BIGNUM *v, OSSL_LIB_CTX *libctx, const char *propq);
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_B(const BIGNUM *b, const BIGNUM *N, const BIGNUM *g,
                const BIGNUM *v);

OSSL_DEPRECATEDIN_3_0
int SRP_Verify_A_mod_N(const BIGNUM *A, const
 BIGNUM *N);
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_u_ex(const BIGNUM *A, const BIGNUM *B, const BIGNUM *N,
                OSSL_LIB_CTX *libctx, const char *propq);
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_u(const BIGNUM *A, const BIGNUM *B, const BIGNUM *N);

/* client side .... */

OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_x_ex(const BIGNUM *s, const char *user, const char *pass,
                OSSL_LIB_CTX *libctx, const char *propq);
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_x(const BIGNUM *s, const char *user, const char *pass);
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_A(const BIGNUM *a, const BIGNUM *N, const BIGNUM *g);
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_client_key_ex(const BIGNUM *N, const BIGNUM *B, const BIGNUM *g,
                    const BIGNUM *x, const BIGNUM *a, const BIGNUM *u,
                    OSSL_LIB_CTX *libctx, const char *propq);
OSSL_DEPRECATEDIN_3_0
BIGNUM *SRP_Calc_client_key(const BIGNUM *N, const BIGNUM *B, const BIGNUM *g,

                const BIGNUM *x, const BIGNUM *a, const BIGNUM *u);
OSSL_DEPRECATEDIN_3_0
int SRP_Verify_B_mod_N(const BIGNUM *B, const BIGNUM *N);

#  define SRP_MINIMAL_N 1024

# endif /* OPENSSL_NO_DEPRECATED_3_0 */

/* This method ignores the configured seed and fails for an unknown user. */
# ifndef OPENSSL_NO_DEPRECATED_1_1_0
```

OSSL_DEPRECATEDIN_1_1_0
SRP_user_pwd *SRP_VBASE_get_by_user(SRP_VBASE *vb, char *username);
endif

ifdef __cplusplus
}
endif
endif

#endif
The MIT License

Copyright (c) 2012 Tim Caswell

Permission is hereby granted, free of charge,
to any person obtaining a copy of this software and
associated documentation files (the "Software"), to
deal in the Software without restriction, including
without limitation the rights to use, copy, modify,
merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom
the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice
shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES
OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR
ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT
 OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright 2023 Yagiz Nizipli and Daniel Lemire

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR

IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (c) 2009 by the Jinja Team, see AUTHORS for more details.

Some rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* The names of the contributors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Apache License 2.0
MIT License

Copyright (c) 2020 Ethan Arrowood

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is

furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
Copyright 2016-2018 Kornel Lesiski

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA,
OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
The MIT License (MIT)
Copyright (c) 2015 Dmitry Ivanov

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A

PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR
IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
UNRECOGNIZED LICENSE; MD5 sum: 24609685b37081fecb25ead63fd1a641
MIT License

Copyright (c) 2017 Joseph Wynn

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
The MIT License

Copyright (c) 2023 sfparse contributors

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR

IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
{
 'variables': {
  'openssl_sources': [
    'openssl/crypto/aes/aes_cbc.c',
    'openssl/crypto/aes/aes_core.c',
    'openssl/crypto/aes/aes_ecb.c',
    'openssl/crypto/aes/aes_misc.c',
    'openssl/crypto/bn/bn_add.c',
    'openssl/crypto/bn/bn_asm.c',
    'openssl/crypto/bn/bn_blind.c',
    'openssl/crypto/bn/bn_const.c',
    'openssl/crypto/bn/bn_conv.c',
    'openssl/crypto/bn/bn_ctx.c',
    'openssl/crypto/bn/bn_dh.c',
    'openssl/crypto/bn/bn_div.c',
    'openssl/crypto/bn/bn_exp.c',
    'openssl/crypto/bn/bn_exp2.c',
    'openssl/crypto/bn/bn_gcd.c',
    'openssl/crypto/bn/bn_gf2m.c',
    'openssl/crypto/bn/bn_intern.c',
    'openssl/crypto/bn/bn_kron.c',
    'openssl/crypto/bn/bn_lib.c',
    'openssl/crypto/bn/bn_mod.c',
    'openssl/crypto/bn/bn_mont.c',
    'openssl/crypto/bn/bn_mpi.c',
    'openssl/crypto/bn/bn_mul.c',
    'openssl/crypto/bn/bn_nist.c',
    'openssl/crypto/bn/bn_prime.c',
    'openssl/crypto/bn/bn_rand.c',
     'openssl/crypto/bn/bn_recp.c',
    'openssl/crypto/bn/bn_rsa_fips186_4.c',
    'openssl/crypto/bn/bn_shift.c',
    'openssl/crypto/bn/bn_sqr.c',
    'openssl/crypto/bn/bn_sqrt.c',
    'openssl/crypto/bn/bn_word.c',
    'openssl/crypto/buffer/buffer.c',
    'openssl/crypto/cmac/cmac.c',
    'openssl/crypto/des/des_enc.c',
    'openssl/crypto/des/ecb3_enc.c',
    'openssl/crypto/des/fcrypt_b.c',
    'openssl/crypto/des/set_key.c',
    'openssl/crypto/dh/dh_backend.c',
    'openssl/crypto/dh/dh_check.c',
    'openssl/crypto/dh/dh_gen.c',
    'openssl/crypto/dh/dh_group_params.c',
    'openssl/crypto/dh/dh_kdf.c',

'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',
'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',

'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_fetch.c',

'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',
'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/initthread.c',
'openssl/crypto/mem_clr.c',
'openssl/crypto/o_str.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',

'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/property/defn_cache.c',

'openssl/crypto/property/property.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rsa/rsa_acvp_test_params.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',
'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/sha/keccak1600.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/stack/stack.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',

'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_fips.c',
'openssl/providers/fips/fipsprov.c',
'openssl/providers/fips/self_test.c',
'openssl/providers/fips/self_test_kats.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',
'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',

'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',

```
  'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
  'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
  'openssl/providers/implementations/macs/cmac_prov.c',
  'openssl/providers/implementations/macs/gmac_prov.c',
  'openssl/providers/implementations/macs/hmac_prov.c',
  'openssl/providers/implementations/macs/kmac_prov.c',
  'openssl/providers/implementations/rands/crngt.c',
  'openssl/providers/implementations/rands/drbg.c',
  'openssl/providers/implementations/rands/drbg_ctr.c',
  'openssl/providers/implementations/rands/drbg_hash.c',
  'openssl/providers/implementations/rands/drbg_hmac.c',
  'openssl/providers/implementations/rands/test_rng.c',
   'openssl/providers/implementations/signature/dsa_sig.c',
  'openssl/providers/implementations/signature/ecdsa_sig.c',
  'openssl/providers/implementations/signature/eddsa_sig.c',
  'openssl/providers/implementations/signature/mac_legacy_sig.c',
  'openssl/providers/implementations/signature/rsa_sig.c',
  'openssl/ssl/s3_cbc.c',
  'openssl/providers/common/der/der_dsa_key.c',
  'openssl/providers/common/der/der_dsa_sig.c',
  'openssl/providers/common/der/der_ec_key.c',
  'openssl/providers/common/der/der_ec_sig.c',
  'openssl/providers/common/der/der_ecx_key.c',
  'openssl/providers/common/der/der_rsa_key.c',
  'openssl/providers/common/provider_ctx.c',
  'openssl/providers/common/provider_err.c',
  'openssl/providers/implementations/ciphers/ciphercommon.c',
  'openssl/providers/implementations/ciphers/ciphercommon_block.c',
  'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
   'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
  'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
  'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
  'openssl/providers/implementations/digests/digestcommon.c',
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/fips/fips_entry.c',

],
'openssl_sources_BSD-x86_64': [
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_ec_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86_64/no-asm/providers/common/der/der_wrap_gen.c',
   './config/archs/BSD-x86_64/no-asm/providers/legacy.ld',
  './config/archs/BSD-x86_64/no-asm/providers/fips.ld',
```

```
  ],
  'openssl_defines_BSD-x86_64': [
    'NDEBUG',
    'L_ENDIAN',
    'OPENSSL_BUILDING_OPENSSL',
    'FIPS_MODULE',
    'FIPS_MODULE',
  ],
  'openssl_cflags_BSD-x86_64': [
    '-Wall -O3',
    '-pthread',
    '-Wall -O3',
  ],
  'openssl_ex_libs_BSD-x86_64': [
    '-pthread',
  ],
  'linker_script': ''
 },
 'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
 ],
 'defines': ['<@(openssl_defines_BSD-x86_64)'],
 'cflags': ['<@(openssl_cflags_BSD-x86_64)'],
 'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],

 'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86_64)'],
 'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86_64)'],
 },
}
/*
* WARNING: do not edit!
* Generated by configdata.pm from Configurations/common0.tmpl, Configurations/unix-Makefile.tmpl
* via Makefile.in
*
* Copyright 2016-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/
```

```
#ifndef OPENSSL_CONFIGURATION_H
# define OPENSSL_CONFIGURATION_H
# pragma once

# ifdef  __cplusplus
extern "C" {
# endif

# ifdef OPENSSL_ALGORITHM_DEFINES
#  error OPENSSL_ALGORITHM_DEFINES no longer supported
# endif

/*
* OpenSSL was configured with the following options:
*/

# define OPENSSL_CONFIGURED_API 30000
# ifndef OPENSSL_RAND_SEED_OS
#  define OPENSSL_RAND_SEED_OS
# endif
# ifndef OPENSSL_THREADS
#  define OPENSSL_THREADS
# endif
# ifndef OPENSSL_NO_AFALGENG
#  define OPENSSL_NO_AFALGENG
# endif
# ifndef
 OPENSSL_NO_ASAN
#  define OPENSSL_NO_ASAN
# endif
# ifndef OPENSSL_NO_ASM
#  define OPENSSL_NO_ASM
# endif
# ifndef OPENSSL_NO_COMP
#  define OPENSSL_NO_COMP
# endif
# ifndef OPENSSL_NO_CRYPTO_MDEBUG
#  define OPENSSL_NO_CRYPTO_MDEBUG
# endif
# ifndef OPENSSL_NO_CRYPTO_MDEBUG_BACKTRACE
#  define OPENSSL_NO_CRYPTO_MDEBUG_BACKTRACE
# endif
# ifndef OPENSSL_NO_EC_NISTP_64_GCC_128
#  define OPENSSL_NO_EC_NISTP_64_GCC_128
# endif
# ifndef OPENSSL_NO_EGD
#  define OPENSSL_NO_EGD
```

```
# endif
# ifndef OPENSSL_NO_EXTERNAL_TESTS
#  define OPENSSL_NO_EXTERNAL_TESTS
# endif
# ifndef OPENSSL_NO_FUZZ_AFL
#  define OPENSSL_NO_FUZZ_AFL
# endif
# ifndef OPENSSL_NO_FUZZ_LIBFUZZER
#  define OPENSSL_NO_FUZZ_LIBFUZZER
# endif
# ifndef OPENSSL_NO_KTLS
#  define OPENSSL_NO_KTLS
# endif
# ifndef OPENSSL_NO_LOADERENG
#  define OPENSSL_NO_LOADERENG
# endif
# ifndef OPENSSL_NO_MD2
#  define OPENSSL_NO_MD2
# endif
# ifndef OPENSSL_NO_MSAN
#  define OPENSSL_NO_MSAN
# endif
# ifndef OPENSSL_NO_RC5
#  define OPENSSL_NO_RC5
#
 endif
# ifndef OPENSSL_NO_SCTP
#  define OPENSSL_NO_SCTP
# endif
# ifndef OPENSSL_NO_SSL3
#  define OPENSSL_NO_SSL3
# endif
# ifndef OPENSSL_NO_SSL3_METHOD
#  define OPENSSL_NO_SSL3_METHOD
# endif
# ifndef OPENSSL_NO_TRACE
#  define OPENSSL_NO_TRACE
# endif
# ifndef OPENSSL_NO_UBSAN
#  define OPENSSL_NO_UBSAN
# endif
# ifndef OPENSSL_NO_UNIT_TEST
#  define OPENSSL_NO_UNIT_TEST
# endif
# ifndef OPENSSL_NO_UPLINK
#  define OPENSSL_NO_UPLINK
# endif
# ifndef OPENSSL_NO_WEAK_SSL_CIPHERS
```

```
#  define OPENSSL_NO_WEAK_SSL_CIPHERS
# endif
# ifndef OPENSSL_NO_DYNAMIC_ENGINE
#  define OPENSSL_NO_DYNAMIC_ENGINE
# endif


/* Generate 80386 code? */
# undef I386_ONLY

/*
* The following are cipher-specific, but are part of the public API.
*/
# if !defined(OPENSSL_SYS_UEFI)
#  define BN_LLONG
/* Only one for the following should be defined */
#  undef SIXTY_FOUR_BIT_LONG
#  undef SIXTY_FOUR_BIT
#  define THIRTY_TWO_BIT
# endif

# define RC4_INT unsigned int

# ifdef  __cplusplus
}
# endif

#endif
                        /* OPENSSL_CONFIGURATION_H */
```

The ISC License

Copyright (c) npm, Inc.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE NPM DISCLAIMS ALL WARRANTIES WITH
REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND
FITNESS. IN NO EVENT SHALL THE NPM BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT,
OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF
USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS
ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS
SOFTWARE.
MIT License

Copyright (c) 2022 GitHub and the TUF Contributors

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT
OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
#ifndef SRC_PERMISSION_INSPECTOR_PERMISSION_H_
#define SRC_PERMISSION_INSPECTOR_PERMISSION_H_

#if defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS

#include <string>
#include "permission/permission_base.h"

namespace node {

namespace permission {

class InspectorPermission final : public PermissionBase {
public:
 void Apply(Environment* env,
            const std::vector<std::string>& allow,
            PermissionScope scope) override;
 bool is_granted(Environment* env,
                 PermissionScope perm,
                 const std::string_view& param = "") const override;

private:
 bool deny_all_;
};

}  // namespace permission

}  // namespace node
```

#endif // defined(NODE_WANT_INTERNALS) && NODE_WANT_INTERNALS
#endif // SRC_PERMISSION_INSPECTOR_PERMISSION_H_
Licensing

This software is covered under the following copyright:

/*
* Copyright (c) 2003-2005 Tom Wu
* All Rights Reserved.
*
* Permission is hereby granted, free of charge, to any person obtaining
* a copy of this software and associated documentation files (the
* "Software"), to deal in the Software without restriction, including
* without limitation the rights to use, copy, modify, merge, publish,
* distribute, sublicense, and/or sell copies of the Software, and to
* permit persons to whom the Software is furnished to do so, subject to
* the following conditions:
*
* The above copyright notice and this permission notice shall be
* included in all copies or substantial portions of the Software.
*
* THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND,
* EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY
* WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
*
* IN NO EVENT SHALL TOM WU BE LIABLE FOR ANY SPECIAL, INCIDENTAL,
 * INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR ANY DAMAGES WHATSOEVER
* RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER OR NOT ADVISED OF
* THE POSSIBILITY OF DAMAGE, AND ON ANY THEORY OF LIABILITY, ARISING OUT
* OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
*
* In addition, the following condition applies:
*
* All redistributions must retain an intact copy of this copyright notice
* and disclaimer.
*/

Address all questions regarding this license to:

 Tom Wu
 tjw@cs.Stanford.EDU
All files in this directory are provided by the following license if not stated
otherwise in the individual file:
==========
This file is provided under a dual BSD/GPLv2 license. When using or
redistributing this file, you may do so under either license.

GPL LICENSE SUMMARY

Copyright (c) 2005-2012 Intel Corporation. All rights reserved.

This program is free software; you can redistribute it and/or modify
it under the terms of version 2 of the GNU General Public License as
published by the Free Software Foundation.

This program is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin St - Fifth Floor, Boston, MA 02110-1301 USA.
The full GNU General Public License
is included in this distribution
in the file called LICENSE.GPL.

Contact Information:
http://software.intel.com/en-us/articles/intel-vtune-amplifier-xe/

BSD LICENSE

Copyright (c) 2005-2012 Intel Corporation. All rights reserved.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

* Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in
  the documentation and/or other materials provided with the
  distribution.
* Neither the name of Intel Corporation nor the names of its
  contributors may be used to endorse or promote products derived
  from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS
AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,

SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
==========

Postject is licensed for use as follows:

"""

MIT License

Copyright (c) 2022 Postman, Inc

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
"""

The Postject license applies to all parts of Postject that are not externally
maintained libraries.

The externally maintained libraries used by Postject are:

- LIEF, located at vendor/LIEF, is licensed as follows:
"""

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities
that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other
media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or
Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and

subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed
by their
Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause

any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along
with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions
stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor
provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this
License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by
reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "{}"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2017 - 2022 R. Thomas
Copyright 2017 - 2022 Quarkslab

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License
at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
"""

```
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/asn1t.h.in
*
* Copyright 2000-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License").  You may not use
* this file except in compliance with the License.  You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/



#ifndef OPENSSL_ASN1T_H
# define OPENSSL_ASN1T_H
# pragma once

# include <openssl/macros.h>
# ifndef OPENSSL_NO_DEPRECATED_3_0
#  define HEADER_ASN1T_H
# endif

# include <stddef.h>
# include <openssl/e_os2.h>
# include <openssl/asn1.h>

# ifdef OPENSSL_BUILD_SHLIBCRYPTO
#  undef OPENSSL_EXTERN
#  define OPENSSL_EXTERN OPENSSL_EXPORT
# endif
```

```
/* ASN1 template defines, structures and functions */

#ifdef  __cplusplus
extern "C" {
#endif

/*-
* These are the possible values for the itype field of the
* ASN1_ITEM structure and determine how it is interpreted.
*
* For PRIMITIVE
 types the underlying type
* determines the behaviour if items is NULL.
*
* Otherwise templates must contain a single
* template and the type is treated in the
* same way as the type specified in the template.
*
* For SEQUENCE types the templates field points
* to the members, the size field is the
* structure size.
*
* For CHOICE types the templates field points
* to each possible member (typically a union)
* and the 'size' field is the offset of the
* selector.
*
* The 'funcs' field is used for application-specific
* data and functions.
*
* The EXTERN type uses a new style d2i/i2d.
* The new style should be used where possible
* because it avoids things like the d2i IMPLICIT
* hack.
*
* MSTRING is a multiple string type, it is used
* for a CHOICE of character strings where the
* actual strings all occupy an ASN1_STRING
* structure. In this case the 'utype' field
* has a special meaning, it is used as a mask
* of acceptable types using the B_ASN1 constants.
 *
* NDEF_SEQUENCE is the same as SEQUENCE except
* that it will use indefinite length constructed
* encoding if requested.
*
*/
```

```
# define ASN1_ITYPE_PRIMITIVE           0x0
# define ASN1_ITYPE_SEQUENCE            0x1
# define ASN1_ITYPE_CHOICE              0x2
/* unused value                       0x3 */
# define ASN1_ITYPE_EXTERN              0x4
# define ASN1_ITYPE_MSTRING             0x5
# define ASN1_ITYPE_NDEF_SEQUENCE       0x6

/* Macro to obtain ASN1_ADB pointer from a type (only used internally) */
# define ASN1_ADB_ptr(iptr) ((const ASN1_ADB *)((iptr)()))

/* Macros for start and end of ASN1_ITEM definition */

# define ASN1_ITEM_start(itname) \
      const ASN1_ITEM * itname##_it(void) \
      { \
            static const ASN1_ITEM local_it = {

# define static_ASN1_ITEM_start(itname) \
      static ASN1_ITEM_start(itname)

# define ASN1_ITEM_end(itname) \
            }; \
      return &local_it; \
      }

/* Macros to aid ASN1 template
 writing */

# define ASN1_ITEM_TEMPLATE(tname) \
      static const ASN1_TEMPLATE tname##_item_tt

# define ASN1_ITEM_TEMPLATE_END(tname) \
      ;\
      ASN1_ITEM_start(tname) \
            ASN1_ITYPE_PRIMITIVE,\
            -1,\
            &tname##_item_tt,\
            0,\
            NULL,\
            0,\
            #tname \
      ASN1_ITEM_end(tname)
# define static_ASN1_ITEM_TEMPLATE_END(tname) \
      ;\
      static_ASN1_ITEM_start(tname) \
            ASN1_ITYPE_PRIMITIVE,\
```

```
            -1,\
            &tname##_item_tt,\
            0,\
            NULL,\
            0,\
            #tname \
        ASN1_ITEM_end(tname)

/* This is a ASN1 type which just embeds a template */

/*-
* This pair helps declare a SEQUENCE. We can do:
*
*      ASN1_SEQUENCE(stname) = {
*              ... SEQUENCE components ...
*      } ASN1_SEQUENCE_END(stname)
*
*      This will produce an ASN1_ITEM called stname_it
 *      for a structure called stname.
*
*      If you want the same structure but a different
*      name then use:
*
*      ASN1_SEQUENCE(itname) = {
*              ... SEQUENCE components ...
*      } ASN1_SEQUENCE_END_name(stname, itname)
*
*      This will create an item called itname_it using
*      a structure called stname.
*/

# define ASN1_SEQUENCE(tname) \
        static const ASN1_TEMPLATE tname##_seq_tt[]

# define ASN1_SEQUENCE_END(stname) ASN1_SEQUENCE_END_name(stname, stname)

# define static_ASN1_SEQUENCE_END(stname) static_ASN1_SEQUENCE_END_name(stname, stname)

# define ASN1_SEQUENCE_END_name(stname, tname) \
        ;\
        ASN1_ITEM_start(tname) \
                ASN1_ITYPE_SEQUENCE,\
                V_ASN1_SEQUENCE,\
                tname##_seq_tt,\
                sizeof(tname##_seq_tt) / sizeof(ASN1_TEMPLATE),\
                NULL,\
                sizeof(stname),\
                #tname \
```

```
    ASN1_ITEM_end(tname)

# define static_ASN1_SEQUENCE_END_name(stname,
 tname) \
    ;\
    static_ASN1_ITEM_start(tname) \
        ASN1_ITYPE_SEQUENCE,\
        V_ASN1_SEQUENCE,\
        tname##_seq_tt,\
        sizeof(tname##_seq_tt) / sizeof(ASN1_TEMPLATE),\
        NULL,\
        sizeof(stname),\
        #stname \
    ASN1_ITEM_end(tname)

# define ASN1_NDEF_SEQUENCE(tname) \
    ASN1_SEQUENCE(tname)

# define ASN1_NDEF_SEQUENCE_cb(tname, cb) \
    ASN1_SEQUENCE_cb(tname, cb)

# define ASN1_SEQUENCE_cb(tname, cb) \
    static const ASN1_AUX tname##_aux = {NULL, 0, 0, 0, cb, 0, NULL}; \
    ASN1_SEQUENCE(tname)

# define ASN1_SEQUENCE_const_cb(tname, const_cb) \
    static const ASN1_AUX tname##_aux = \
      {NULL, ASN1_AFLG_CONST_CB, 0, 0, NULL, 0, const_cb}; \
    ASN1_SEQUENCE(tname)

# define ASN1_SEQUENCE_cb_const_cb(tname, cb, const_cb) \
    static const ASN1_AUX tname##_aux = \
      {NULL, ASN1_AFLG_CONST_CB, 0, 0, cb,
 0, const_cb}; \
    ASN1_SEQUENCE(tname)

# define ASN1_SEQUENCE_ref(tname, cb) \
    static const ASN1_AUX tname##_aux = {NULL, ASN1_AFLG_REFCOUNT, offsetof(tname, references),
offsetof(tname, lock), cb, 0, NULL}; \
    ASN1_SEQUENCE(tname)

# define ASN1_SEQUENCE_enc(tname, enc, cb) \
    static const ASN1_AUX tname##_aux = {NULL, ASN1_AFLG_ENCODING, 0, 0, cb, offsetof(tname, enc),
NULL}; \
    ASN1_SEQUENCE(tname)

# define ASN1_NDEF_SEQUENCE_END(tname) \
    ;\
```

```
    ASN1_ITEM_start(tname) \
            ASN1_ITYPE_NDEF_SEQUENCE,\
            V_ASN1_SEQUENCE,\
            tname##_seq_tt,\
            sizeof(tname##_seq_tt) / sizeof(ASN1_TEMPLATE),\
            NULL,\
            sizeof(tname),\
            #tname \
    ASN1_ITEM_end(tname)
# define static_ASN1_NDEF_SEQUENCE_END(tname) \
    ;\
    static_ASN1_ITEM_start(tname) \
            ASN1_ITYPE_NDEF_SEQUENCE,\
            V_ASN1_SEQUENCE,\

    tname##_seq_tt,\
            sizeof(tname##_seq_tt) / sizeof(ASN1_TEMPLATE),\
            NULL,\
            sizeof(tname),\
            #tname \
    ASN1_ITEM_end(tname)


# define ASN1_SEQUENCE_END_enc(stname, tname) ASN1_SEQUENCE_END_ref(stname, tname)

# define ASN1_SEQUENCE_END_cb(stname, tname) ASN1_SEQUENCE_END_ref(stname, tname)
# define static_ASN1_SEQUENCE_END_cb(stname, tname) static_ASN1_SEQUENCE_END_ref(stname, tname)

# define ASN1_SEQUENCE_END_ref(stname, tname) \
    ;\
    ASN1_ITEM_start(tname) \
            ASN1_ITYPE_SEQUENCE,\
            V_ASN1_SEQUENCE,\
            tname##_seq_tt,\
            sizeof(tname##_seq_tt) / sizeof(ASN1_TEMPLATE),\
            &tname##_aux,\
            sizeof(stname),\
            #tname \
    ASN1_ITEM_end(tname)
# define static_ASN1_SEQUENCE_END_ref(stname, tname) \
    ;\
    static_ASN1_ITEM_start(tname) \
            ASN1_ITYPE_SEQUENCE,\

  V_ASN1_SEQUENCE,\
            tname##_seq_tt,\
            sizeof(tname##_seq_tt) / sizeof(ASN1_TEMPLATE),\
            &tname##_aux,\
```

```
            sizeof(stname),\
            #stname \
        ASN1_ITEM_end(tname)

# define ASN1_NDEF_SEQUENCE_END_cb(stname, tname) \
        ;\
        ASN1_ITEM_start(tname) \
            ASN1_ITYPE_NDEF_SEQUENCE,\
            V_ASN1_SEQUENCE,\
            tname##_seq_tt,\
            sizeof(tname##_seq_tt) / sizeof(ASN1_TEMPLATE),\
            &tname##_aux,\
            sizeof(stname),\
            #stname \
        ASN1_ITEM_end(tname)

/*-
* This pair helps declare a CHOICE type. We can do:
*
*      ASN1_CHOICE(chname) = {
*            ... CHOICE options ...
*      ASN1_CHOICE_END(chname)
*
*      This will produce an ASN1_ITEM called chname_it
*      for a structure called chname. The structure
*      definition must look like this:
*      typedef struct {
*            int type;
*
           union {
*                 ASN1_SOMETHING *opt1;
*                 ASN1_SOMEOTHER *opt2;
*            } value;
*      } chname;
*
*      the name of the selector must be 'type'.
*      to use an alternative selector name use the
*      ASN1_CHOICE_END_selector() version.
*/

# define ASN1_CHOICE(tname) \
        static const ASN1_TEMPLATE tname##_ch_tt[]

# define ASN1_CHOICE_cb(tname, cb) \
        static const ASN1_AUX tname##_aux = {NULL, 0, 0, 0, cb, 0, NULL}; \
        ASN1_CHOICE(tname)

# define ASN1_CHOICE_END(stname) ASN1_CHOICE_END_name(stname, stname)
```

```
# define static_ASN1_CHOICE_END(stname) static_ASN1_CHOICE_END_name(stname, stname)

# define ASN1_CHOICE_END_name(stname, tname) ASN1_CHOICE_END_selector(stname, tname, type)

# define static_ASN1_CHOICE_END_name(stname, tname) static_ASN1_CHOICE_END_selector(stname, tname,
type)

# define ASN1_CHOICE_END_selector(stname, tname, selname) \
    ;\
    ASN1_ITEM_start(tname) \

   ASN1_ITYPE_CHOICE,\
        offsetof(stname,selname) ,\
        tname##_ch_tt,\
        sizeof(tname##_ch_tt) / sizeof(ASN1_TEMPLATE),\
        NULL,\
        sizeof(stname),\
        #stname \
    ASN1_ITEM_end(tname)

# define static_ASN1_CHOICE_END_selector(stname, tname, selname) \
    ;\
    static_ASN1_ITEM_start(tname) \
        ASN1_ITYPE_CHOICE,\
        offsetof(stname,selname) ,\
        tname##_ch_tt,\
        sizeof(tname##_ch_tt) / sizeof(ASN1_TEMPLATE),\
        NULL,\
        sizeof(stname),\
        #stname \
    ASN1_ITEM_end(tname)

# define ASN1_CHOICE_END_cb(stname, tname, selname) \
    ;\
    ASN1_ITEM_start(tname) \
        ASN1_ITYPE_CHOICE,\
        offsetof(stname,selname) ,\
        tname##_ch_tt,\
        sizeof(tname##_ch_tt) / sizeof(ASN1_TEMPLATE),\
        &tname##_aux,\

  sizeof(stname),\
        #stname \
    ASN1_ITEM_end(tname)

/* This helps with the template wrapper form of ASN1_ITEM */
```

```
# define ASN1_EX_TEMPLATE_TYPE(flags, tag, name, type) { \
      (flags), (tag), 0,\
      #name, ASN1_ITEM_ref(type) }

/* These help with SEQUENCE or CHOICE components */

/* used to declare other types */

# define ASN1_EX_TYPE(flags, tag, stname, field, type) { \
      (flags), (tag), offsetof(stname, field),\
      #field, ASN1_ITEM_ref(type) }

/* implicit and explicit helper macros */

# define ASN1_IMP_EX(stname, field, type, tag, ex) \
       ASN1_EX_TYPE(ASN1_TFLG_IMPLICIT | (ex), tag, stname, field, type)

# define ASN1_EXP_EX(stname, field, type, tag, ex) \
       ASN1_EX_TYPE(ASN1_TFLG_EXPLICIT | (ex), tag, stname, field, type)

/* Any defined by macros: the field used is in the table itself */

# define ASN1_ADB_OBJECT(tblname) { ASN1_TFLG_ADB_OID, -1, 0, #tblname, tblname##_adb }
# define ASN1_ADB_INTEGER(tblname) { ASN1_TFLG_ADB_INT,
 -1, 0, #tblname, tblname##_adb }

/* Plain simple type */
# define ASN1_SIMPLE(stname, field, type) ASN1_EX_TYPE(0,0, stname, field, type)
/* Embedded simple type */
# define ASN1_EMBED(stname, field, type) ASN1_EX_TYPE(ASN1_TFLG_EMBED,0, stname, field, type)

/* OPTIONAL simple type */
# define ASN1_OPT(stname, field, type) ASN1_EX_TYPE(ASN1_TFLG_OPTIONAL, 0, stname, field, type)
# define ASN1_OPT_EMBED(stname, field, type)
ASN1_EX_TYPE(ASN1_TFLG_OPTIONAL|ASN1_TFLG_EMBED, 0, stname, field, type)

/* IMPLICIT tagged simple type */
# define ASN1_IMP(stname, field, type, tag) ASN1_IMP_EX(stname, field, type, tag, 0)
# define ASN1_IMP_EMBED(stname, field, type, tag) ASN1_IMP_EX(stname, field, type, tag,
ASN1_TFLG_EMBED)

/* IMPLICIT tagged OPTIONAL simple type */
# define ASN1_IMP_OPT(stname, field, type, tag) ASN1_IMP_EX(stname, field, type, tag,
ASN1_TFLG_OPTIONAL)
# define ASN1_IMP_OPT_EMBED(stname, field, type, tag) ASN1_IMP_EX(stname, field, type, tag,
ASN1_TFLG_OPTIONAL|ASN1_TFLG_EMBED)

/*
```

```
 Same as above but EXPLICIT */

# define ASN1_EXP(stname, field, type, tag) ASN1_EXP_EX(stname, field, type, tag, 0)
# define ASN1_EXP_EMBED(stname, field, type, tag) ASN1_EXP_EX(stname, field, type, tag,
ASN1_TFLG_EMBED)
# define ASN1_EXP_OPT(stname, field, type, tag) ASN1_EXP_EX(stname, field, type, tag,
ASN1_TFLG_OPTIONAL)
# define ASN1_EXP_OPT_EMBED(stname, field, type, tag) ASN1_EXP_EX(stname, field, type, tag,
ASN1_TFLG_OPTIONAL|ASN1_TFLG_EMBED)

/* SEQUENCE OF type */
# define ASN1_SEQUENCE_OF(stname, field, type) \
        ASN1_EX_TYPE(ASN1_TFLG_SEQUENCE_OF, 0, stname, field, type)

/* OPTIONAL SEQUENCE OF */
# define ASN1_SEQUENCE_OF_OPT(stname, field, type) \
        ASN1_EX_TYPE(ASN1_TFLG_SEQUENCE_OF|ASN1_TFLG_OPTIONAL, 0, stname, field, type)

/* Same as above but for SET OF */

# define ASN1_SET_OF(stname, field, type) \
        ASN1_EX_TYPE(ASN1_TFLG_SET_OF, 0, stname, field, type)

# define ASN1_SET_OF_OPT(stname, field, type)
 \
        ASN1_EX_TYPE(ASN1_TFLG_SET_OF|ASN1_TFLG_OPTIONAL, 0, stname, field, type)

/* Finally compound types of SEQUENCE, SET, IMPLICIT, EXPLICIT and OPTIONAL */

# define ASN1_IMP_SET_OF(stname, field, type, tag) \
                ASN1_IMP_EX(stname, field, type, tag, ASN1_TFLG_SET_OF)

# define ASN1_EXP_SET_OF(stname, field, type, tag) \
                ASN1_EXP_EX(stname, field, type, tag, ASN1_TFLG_SET_OF)

# define ASN1_IMP_SET_OF_OPT(stname, field, type, tag) \
                ASN1_IMP_EX(stname, field, type, tag, ASN1_TFLG_SET_OF|ASN1_TFLG_OPTIONAL)

# define ASN1_EXP_SET_OF_OPT(stname, field, type, tag) \
                ASN1_EXP_EX(stname, field, type, tag, ASN1_TFLG_SET_OF|ASN1_TFLG_OPTIONAL)

# define ASN1_IMP_SEQUENCE_OF(stname, field, type, tag) \
                ASN1_IMP_EX(stname, field, type, tag, ASN1_TFLG_SEQUENCE_OF)

# define ASN1_IMP_SEQUENCE_OF_OPT(stname, field, type, tag) \
                ASN1_IMP_EX(stname,
 field, type, tag, ASN1_TFLG_SEQUENCE_OF|ASN1_TFLG_OPTIONAL)
```

```
# define ASN1_EXP_SEQUENCE_OF(stname, field, type, tag) \
                ASN1_EXP_EX(stname, field, type, tag, ASN1_TFLG_SEQUENCE_OF)

# define ASN1_EXP_SEQUENCE_OF_OPT(stname, field, type, tag) \
                ASN1_EXP_EX(stname, field, type, tag,
ASN1_TFLG_SEQUENCE_OF|ASN1_TFLG_OPTIONAL)

/* EXPLICIT using indefinite length constructed form */
# define ASN1_NDEF_EXP(stname, field, type, tag) \
                ASN1_EXP_EX(stname, field, type, tag, ASN1_TFLG_NDEF)

/* EXPLICIT OPTIONAL using indefinite length constructed form */
# define ASN1_NDEF_EXP_OPT(stname, field, type, tag) \
                ASN1_EXP_EX(stname, field, type, tag, ASN1_TFLG_OPTIONAL|ASN1_TFLG_NDEF)

/* Macros for the ASN1_ADB structure */

# define ASN1_ADB(name) \
     static const ASN1_ADB_TABLE name##_adbtbl[]

# define ASN1_ADB_END(name, flags, field, adb_cb, def, none) \
     ;\
     static const ASN1_ITEM
 *name##_adb(void) \
     { \
     static const ASN1_ADB internal_adb = \
           {\
           flags,\
           offsetof(name, field),\
           adb_cb,\
           name##_adbtbl,\
           sizeof(name##_adbtbl) / sizeof(ASN1_ADB_TABLE),\
           def,\
           none\
           }; \
           return (const ASN1_ITEM *) &internal_adb; \
     } \
     void dummy_function(void)

# define ADB_ENTRY(val, template) {val, template}

# define ASN1_ADB_TEMPLATE(name) \
     static const ASN1_TEMPLATE name##_tt

/*
* This is the ASN1 template structure that defines a wrapper round the
* actual type. It determines the actual position of the field in the value
* structure, various flags such as OPTIONAL and the field name.
```

```
*/

struct ASN1_TEMPLATE_st {
  unsigned long flags;       /* Various flags */
  long tag;                  /* tag, not used if no tagging */
  unsigned long offset;      /* Offset
 of this field in structure */
  const char *field_name;    /* Field name */
  ASN1_ITEM_EXP *item;       /* Relevant ASN1_ITEM or ASN1_ADB */
};

/* Macro to extract ASN1_ITEM and ASN1_ADB pointer from ASN1_TEMPLATE */

# define ASN1_TEMPLATE_item(t) (t->item_ptr)
# define ASN1_TEMPLATE_adb(t) (t->item_ptr)

typedef struct ASN1_ADB_TABLE_st ASN1_ADB_TABLE;
typedef struct ASN1_ADB_st ASN1_ADB;

struct ASN1_ADB_st {
  unsigned long flags;       /* Various flags */
  unsigned long offset;      /* Offset of selector field */
  int (*adb_cb)(long *psel);  /* Application callback */
  const ASN1_ADB_TABLE *tbl;  /* Table of possible types */
  long tblcount;             /* Number of entries in tbl */
  const ASN1_TEMPLATE *default_tt; /* Type to use if no match */
  const ASN1_TEMPLATE *null_tt; /* Type to use if selector is NULL */
};

struct ASN1_ADB_TABLE_st {
  long value;                /* NID for an object or value for an int */
  const ASN1_TEMPLATE tt;
  /* item for this value */
};

/* template flags */

/* Field is optional */
# define ASN1_TFLG_OPTIONAL      (0x1)

/* Field is a SET OF */
# define ASN1_TFLG_SET_OF        (0x1 << 1)

/* Field is a SEQUENCE OF */
# define ASN1_TFLG_SEQUENCE_OF   (0x2 << 1)

/*
* Special case: this refers to a SET OF that will be sorted into DER order
```

```
* when encoded *and* the corresponding STACK will be modified to match the
* new order.
*/
# define ASN1_TFLG_SET_ORDER     (0x3 << 1)

/* Mask for SET OF or SEQUENCE OF */
# define ASN1_TFLG_SK_MASK       (0x3 << 1)

/*
* These flags mean the tag should be taken from the tag field. If EXPLICIT
* then the underlying type is used for the inner tag.
*/

/* IMPLICIT tagging */
# define ASN1_TFLG_IMPTAG        (0x1 << 3)

/* EXPLICIT tagging, inner tag from underlying type */
# define ASN1_TFLG_EXPTAG        (0x2 << 3)

# define ASN1_TFLG_TAG_MASK      (0x3 << 3)

/* context specific IMPLICIT */
# define ASN1_TFLG_IMPLICIT      (ASN1_TFLG_IMPTAG|ASN1_TFLG_CONTEXT)

/*
 context specific EXPLICIT */
# define ASN1_TFLG_EXPLICIT      (ASN1_TFLG_EXPTAG|ASN1_TFLG_CONTEXT)

/*
* If tagging is in force these determine the type of tag to use. Otherwise
* the tag is determined by the underlying type. These values reflect the
* actual octet format.
*/

/* Universal tag */
# define ASN1_TFLG_UNIVERSAL     (0x0<<6)
/* Application tag */
# define ASN1_TFLG_APPLICATION   (0x1<<6)
/* Context specific tag */
# define ASN1_TFLG_CONTEXT       (0x2<<6)
/* Private tag */
# define ASN1_TFLG_PRIVATE       (0x3<<6)

# define ASN1_TFLG_TAG_CLASS     (0x3<<6)

/*
* These are for ANY DEFINED BY type. In this case the 'item' field points to
* an ASN1_ADB structure which contains a table of values to decode the
```

```
* relevant type
*/

# define ASN1_TFLG_ADB_MASK     (0x3<<8)

# define ASN1_TFLG_ADB_OID      (0x1<<8)

# define ASN1_TFLG_ADB_INT      (0x1<<9)

/*
* This flag when present in a SEQUENCE OF, SET OF or EXPLICIT causes
* indefinite length constructed
 encoding to be used if required.
*/

# define ASN1_TFLG_NDEF         (0x1<<11)

/* Field is embedded and not a pointer */
# define ASN1_TFLG_EMBED        (0x1 << 12)

/* This is the actual ASN1 item itself */

struct ASN1_ITEM_st {
  char itype;               /* The item type, primitive, SEQUENCE, CHOICE
                             * or extern */
  long utype;               /* underlying type */
  const ASN1_TEMPLATE *templates; /* If SEQUENCE or CHOICE this contains
                                   * the contents */
  long tcount;              /* Number of templates if SEQUENCE or CHOICE */
  const void *funcs;        /* further data and type-specific functions */
  /* funcs can be ASN1_PRIMITIVE_FUNCS*, ASN1_EXTERN_FUNCS*, or ASN1_AUX* */
  long size;                /* Structure size (usually) */
  const char *sname;        /* Structure name */
};

/*
* Cache for ASN1 tag and length, so we don't keep re-reading it for things
* like
 CHOICE
*/

struct ASN1_TLC_st {
  char valid;               /* Values below are valid */
  int ret;                  /* return value */
  long plen;                /* length */
  int ptag;                 /* class value */
  int pclass;               /* class value */
  int hdrlen;               /* header length */
```

```
};

/* Typedefs for ASN1 function pointers */
typedef int ASN1_ex_d2i(ASN1_VALUE **pval, const unsigned char **in, long len,
                        const ASN1_ITEM *it, int tag, int aclass, char opt,
                        ASN1_TLC *ctx);

typedef int ASN1_ex_d2i_ex(ASN1_VALUE **pval, const unsigned char **in, long len,
                           const ASN1_ITEM *it, int tag, int aclass, char opt,
                           ASN1_TLC *ctx, OSSL_LIB_CTX *libctx,
                           const char *propq);
typedef int ASN1_ex_i2d(const ASN1_VALUE **pval, unsigned char **out,
                        const ASN1_ITEM *it, int tag, int aclass);
typedef
 int ASN1_ex_new_func(ASN1_VALUE **pval, const ASN1_ITEM *it);
typedef int ASN1_ex_new_ex_func(ASN1_VALUE **pval, const ASN1_ITEM *it,
                                OSSL_LIB_CTX *libctx, const char *propq);
typedef void ASN1_ex_free_func(ASN1_VALUE **pval, const ASN1_ITEM *it);

typedef int ASN1_ex_print_func(BIO *out, const ASN1_VALUE **pval,
                               int indent, const char *fname,
                               const ASN1_PCTX *pctx);

typedef int ASN1_primitive_i2c(const ASN1_VALUE **pval, unsigned char *cont,
                               int *putype, const ASN1_ITEM *it);
typedef int ASN1_primitive_c2i(ASN1_VALUE **pval, const unsigned char *cont,
                               int len, int utype, char *free_cont,
                               const ASN1_ITEM *it);
typedef int ASN1_primitive_print(BIO *out, const ASN1_VALUE **pval,
                                 const ASN1_ITEM *it, int indent,
                                 const ASN1_PCTX *pctx);

typedef
 struct ASN1_EXTERN_FUNCS_st {
  void *app_data;
  ASN1_ex_new_func *asn1_ex_new;
  ASN1_ex_free_func *asn1_ex_free;
  ASN1_ex_free_func *asn1_ex_clear;
  ASN1_ex_d2i *asn1_ex_d2i;
  ASN1_ex_i2d *asn1_ex_i2d;
  ASN1_ex_print_func *asn1_ex_print;
  ASN1_ex_new_ex_func *asn1_ex_new_ex;
  ASN1_ex_d2i_ex *asn1_ex_d2i_ex;
} ASN1_EXTERN_FUNCS;

typedef struct ASN1_PRIMITIVE_FUNCS_st {
  void *app_data;
  unsigned long flags;
```

```
  ASN1_ex_new_func *prim_new;
  ASN1_ex_free_func *prim_free;
  ASN1_ex_free_func *prim_clear;
  ASN1_primitive_c2i *prim_c2i;
  ASN1_primitive_i2c *prim_i2c;
  ASN1_primitive_print *prim_print;
} ASN1_PRIMITIVE_FUNCS;

/*
* This is the ASN1_AUX structure: it handles various miscellaneous
* requirements. For example the use of reference counts and an informational
* callback. The "informational callback" is called at various points during
* the ASN1 encoding and decoding. It can be used to provide minor
* customisation of the
 structures used. This is most useful where the
* supplied routines *almost* do the right thing but need some extra help at
* a few points. If the callback returns zero then it is assumed a fatal
* error has occurred and the main operation should be abandoned. If major
* changes in the default behaviour are required then an external type is
* more appropriate.
* For the operations ASN1_OP_I2D_PRE, ASN1_OP_I2D_POST, ASN1_OP_PRINT_PRE, and
* ASN1_OP_PRINT_POST, meanwhile a variant of the callback with const parameter
* 'in' is provided to make clear statically that its input is not modified. If
* and only if this variant is in use the flag ASN1_AFLG_CONST_CB must be set.
*/

typedef int ASN1_aux_cb(int operation, ASN1_VALUE **in, const ASN1_ITEM *it,
                        void *exarg);
typedef int ASN1_aux_const_cb(int operation, const ASN1_VALUE **in,
                              const ASN1_ITEM *it, void *exarg);

typedef struct ASN1_AUX_st {
  void *app_data;
  int flags;
   int ref_offset;           /* Offset of reference value */
  int ref_lock;             /* Offset of lock value */
  ASN1_aux_cb *asn1_cb;
  int enc_offset;           /* Offset of ASN1_ENCODING structure */
  ASN1_aux_const_cb *asn1_const_cb; /* for ASN1_OP_I2D_ and ASN1_OP_PRINT_ */
} ASN1_AUX;

/* For print related callbacks exarg points to this structure */
typedef struct ASN1_PRINT_ARG_st {
  BIO *out;
  int indent;
  const ASN1_PCTX *pctx;
} ASN1_PRINT_ARG;
```

```
/* For streaming related callbacks exarg points to this structure */
typedef struct ASN1_STREAM_ARG_st {
  /* BIO to stream through */
  BIO *out;
  /* BIO with filters appended */
  BIO *ndef_bio;
  /* Streaming I/O boundary */
  unsigned char **boundary;
} ASN1_STREAM_ARG;

/* Flags in ASN1_AUX */

/* Use a reference count */
# define ASN1_AFLG_REFCOUNT      1
/* Save the encoding of structure (useful for signatures) */
# define ASN1_AFLG_ENCODING      2
/* The Sequence length is invalid
 */
# define ASN1_AFLG_BROKEN        4
/* Use the new asn1_const_cb */
# define ASN1_AFLG_CONST_CB      8

/* operation values for asn1_cb */

# define ASN1_OP_NEW_PRE         0
# define ASN1_OP_NEW_POST        1
# define ASN1_OP_FREE_PRE        2
# define ASN1_OP_FREE_POST       3
# define ASN1_OP_D2I_PRE         4
# define ASN1_OP_D2I_POST        5
# define ASN1_OP_I2D_PRE         6
# define ASN1_OP_I2D_POST        7
# define ASN1_OP_PRINT_PRE       8
# define ASN1_OP_PRINT_POST      9
# define ASN1_OP_STREAM_PRE      10
# define ASN1_OP_STREAM_POST     11
# define ASN1_OP_DETACHED_PRE    12
# define ASN1_OP_DETACHED_POST   13
# define ASN1_OP_DUP_PRE         14
# define ASN1_OP_DUP_POST        15
# define ASN1_OP_GET0_LIBCTX     16
# define ASN1_OP_GET0_PROPQ      17

/* Macro to implement a primitive type */
# define IMPLEMENT_ASN1_TYPE(stname) IMPLEMENT_ASN1_TYPE_ex(stname, stname, 0)
# define IMPLEMENT_ASN1_TYPE_ex(itname, vname, ex) \
                        ASN1_ITEM_start(itname)
```

```
 \
                        ASN1_ITYPE_PRIMITIVE, V_##vname, NULL, 0, NULL, ex, #itname \
                    ASN1_ITEM_end(itname)

/* Macro to implement a multi string type */
# define IMPLEMENT_ASN1_MSTRING(itname, mask) \
                    ASN1_ITEM_start(itname) \
                        ASN1_ITYPE_MSTRING, mask, NULL, 0, NULL, sizeof(ASN1_STRING), #itname \
                    ASN1_ITEM_end(itname)

# define IMPLEMENT_EXTERN_ASN1(sname, tag, fptrs) \
    ASN1_ITEM_start(sname) \
        ASN1_ITYPE_EXTERN, \
        tag, \
        NULL, \
        0, \
        &fptrs, \
        0, \
        #sname \
    ASN1_ITEM_end(sname)

/* Macro to implement standard functions in terms of ASN1_ITEM structures */

# define IMPLEMENT_ASN1_FUNCTIONS(stname) IMPLEMENT_ASN1_FUNCTIONS_fname(stname,
stname, stname)

# define IMPLEMENT_ASN1_FUNCTIONS_name(stname,
 itname) IMPLEMENT_ASN1_FUNCTIONS_fname(stname, itname, itname)

# define IMPLEMENT_ASN1_FUNCTIONS_ENCODE_name(stname, itname) \
                IMPLEMENT_ASN1_FUNCTIONS_ENCODE_fname(stname, itname, itname)

# define IMPLEMENT_STATIC_ASN1_ALLOC_FUNCTIONS(stname) \
        IMPLEMENT_ASN1_ALLOC_FUNCTIONS_pfname(static, stname, stname, stname)

# define IMPLEMENT_ASN1_ALLOC_FUNCTIONS(stname) \
        IMPLEMENT_ASN1_ALLOC_FUNCTIONS_fname(stname, stname, stname)

# define IMPLEMENT_ASN1_ALLOC_FUNCTIONS_pfname(pre, stname, itname, fname) \
    pre stname *fname##_new(void) \
    { \
        return (stname *)ASN1_item_new(ASN1_ITEM_rptr(itname)); \
    } \
    pre void fname##_free(stname *a) \
    { \
        ASN1_item_free((ASN1_VALUE *)a, ASN1_ITEM_rptr(itname)); \
    }
```

```
# define IMPLEMENT_ASN1_ALLOC_FUNCTIONS_fname(stname, itname, fname) \
    stname *fname##_new(void) \
    { \
        return (stname *)ASN1_item_new(ASN1_ITEM_rptr(itname));
 \
    } \
    void fname##_free(stname *a) \
    { \
        ASN1_item_free((ASN1_VALUE *)a, ASN1_ITEM_rptr(itname)); \
    }

# define IMPLEMENT_ASN1_FUNCTIONS_fname(stname, itname, fname) \
    IMPLEMENT_ASN1_ENCODE_FUNCTIONS_fname(stname, itname, fname) \
    IMPLEMENT_ASN1_ALLOC_FUNCTIONS_fname(stname, itname, fname)

# define IMPLEMENT_ASN1_ENCODE_FUNCTIONS_fname(stname, itname, fname) \
    stname *d2i_##fname(stname **a, const unsigned char **in, long len) \
    { \
        return (stname *)ASN1_item_d2i((ASN1_VALUE **)a, in, len, ASN1_ITEM_rptr(itname));\
    } \
    int i2d_##fname(const stname *a, unsigned char **out) \
    { \
        return ASN1_item_i2d((const ASN1_VALUE *)a, out, ASN1_ITEM_rptr(itname));\
    }

# define IMPLEMENT_ASN1_NDEF_FUNCTION(stname) \
    int i2d_##stname##_NDEF(const stname *a, unsigned char **out) \
    { \
        return
 ASN1_item_ndef_i2d((const ASN1_VALUE *)a, out, ASN1_ITEM_rptr(stname));\
    }

# define IMPLEMENT_STATIC_ASN1_ENCODE_FUNCTIONS(stname) \
    static stname *d2i_##stname(stname **a, \
                        const unsigned char **in, long len) \
    { \
        return (stname *)ASN1_item_d2i((ASN1_VALUE **)a, in, len, \
                                ASN1_ITEM_rptr(stname)); \
    } \
    static int i2d_##stname(const stname *a, unsigned char **out) \
    { \
        return ASN1_item_i2d((const ASN1_VALUE *)a, out, \
                         ASN1_ITEM_rptr(stname)); \
    }

# define IMPLEMENT_ASN1_DUP_FUNCTION(stname) \
    stname * stname##_dup(const stname *x) \
    { \
```

```
    return ASN1_item_dup(ASN1_ITEM_rptr(stname), x); \
    }

# define IMPLEMENT_ASN1_PRINT_FUNCTION(stname) \
    IMPLEMENT_ASN1_PRINT_FUNCTION_fname(stname, stname, stname)

# define IMPLEMENT_ASN1_PRINT_FUNCTION_fname(stname,
 itname, fname) \
    int fname##_print_ctx(BIO *out, const stname *x, int indent, \
                                const ASN1_PCTX *pctx) \
    { \
        return ASN1_item_print(out, (const ASN1_VALUE *)x, indent, \
            ASN1_ITEM_rptr(itname), pctx); \
    }

/* external definitions for primitive types */

DECLARE_ASN1_ITEM(ASN1_BOOLEAN)
DECLARE_ASN1_ITEM(ASN1_TBOOLEAN)
DECLARE_ASN1_ITEM(ASN1_FBOOLEAN)
DECLARE_ASN1_ITEM(ASN1_SEQUENCE)
DECLARE_ASN1_ITEM(CBIGNUM)
DECLARE_ASN1_ITEM(BIGNUM)
DECLARE_ASN1_ITEM(INT32)
DECLARE_ASN1_ITEM(ZINT32)
DECLARE_ASN1_ITEM(UINT32)
DECLARE_ASN1_ITEM(ZUINT32)
DECLARE_ASN1_ITEM(INT64)
DECLARE_ASN1_ITEM(ZINT64)
DECLARE_ASN1_ITEM(UINT64)
DECLARE_ASN1_ITEM(ZUINT64)

# ifndef OPENSSL_NO_DEPRECATED_3_0
/*
* LONG and ZLONG are strongly discouraged for use as stored data, as the
* underlying C type (long) differs in size depending on the architecture.
* They are designed with 32-bit longs
 in mind.
*/
DECLARE_ASN1_ITEM(LONG)
DECLARE_ASN1_ITEM(ZLONG)
# endif

SKM_DEFINE_STACK_OF_INTERNAL(ASN1_VALUE, ASN1_VALUE, ASN1_VALUE)
#define sk_ASN1_VALUE_num(sk) OPENSSL_sk_num(ossl_check_const_ASN1_VALUE_sk_type(sk))
#define sk_ASN1_VALUE_value(sk, idx) ((ASN1_VALUE
*)OPENSSL_sk_value(ossl_check_const_ASN1_VALUE_sk_type(sk), (idx)))
#define sk_ASN1_VALUE_new(cmp) ((STACK_OF(ASN1_VALUE)
```

*)OPENSSL_sk_new(ossl_check_ASN1_VALUE_compfunc_type(cmp)))
#define sk_ASN1_VALUE_new_null() ((STACK_OF(ASN1_VALUE) *)OPENSSL_sk_new_null())
#define sk_ASN1_VALUE_new_reserve(cmp, n) ((STACK_OF(ASN1_VALUE)
*)OPENSSL_sk_new_reserve(ossl_check_ASN1_VALUE_compfunc_type(cmp), (n)))
#define sk_ASN1_VALUE_reserve(sk, n) OPENSSL_sk_reserve(ossl_check_ASN1_VALUE_sk_type(sk), (n))
#define sk_ASN1_VALUE_free(sk) OPENSSL_sk_free(ossl_check_ASN1_VALUE_sk_type(sk))
#define sk_ASN1_VALUE_zero(sk) OPENSSL_sk_zero(ossl_check_ASN1_VALUE_sk_type(sk))
#define sk_ASN1_VALUE_delete(sk, i) ((ASN1_VALUE
*)OPENSSL_sk_delete(ossl_check_ASN1_VALUE_sk_type(sk),
(i)))
#define sk_ASN1_VALUE_delete_ptr(sk, ptr) ((ASN1_VALUE
*)OPENSSL_sk_delete_ptr(ossl_check_ASN1_VALUE_sk_type(sk), ossl_check_ASN1_VALUE_type(ptr)))
#define sk_ASN1_VALUE_push(sk, ptr) OPENSSL_sk_push(ossl_check_ASN1_VALUE_sk_type(sk),
ossl_check_ASN1_VALUE_type(ptr))
#define sk_ASN1_VALUE_unshift(sk, ptr) OPENSSL_sk_unshift(ossl_check_ASN1_VALUE_sk_type(sk),
ossl_check_ASN1_VALUE_type(ptr))
#define sk_ASN1_VALUE_pop(sk) ((ASN1_VALUE
*)OPENSSL_sk_pop(ossl_check_ASN1_VALUE_sk_type(sk)))
#define sk_ASN1_VALUE_shift(sk) ((ASN1_VALUE
*)OPENSSL_sk_shift(ossl_check_ASN1_VALUE_sk_type(sk)))
#define sk_ASN1_VALUE_pop_free(sk, freefunc)
OPENSSL_sk_pop_free(ossl_check_ASN1_VALUE_sk_type(sk),ossl_check_ASN1_VALUE_freefunc_type(freef
unc))
#define sk_ASN1_VALUE_insert(sk, ptr, idx) OPENSSL_sk_insert(ossl_check_ASN1_VALUE_sk_type(sk),
ossl_check_ASN1_VALUE_type(ptr), (idx))
#define sk_ASN1_VALUE_set(sk, idx, ptr) ((ASN1_VALUE
*)OPENSSL_sk_set(ossl_check_ASN1_VALUE_sk_type(sk),
(idx), ossl_check_ASN1_VALUE_type(ptr)))
#define sk_ASN1_VALUE_find(sk, ptr) OPENSSL_sk_find(ossl_check_ASN1_VALUE_sk_type(sk),
ossl_check_ASN1_VALUE_type(ptr))
#define sk_ASN1_VALUE_find_ex(sk, ptr) OPENSSL_sk_find_ex(ossl_check_ASN1_VALUE_sk_type(sk),
ossl_check_ASN1_VALUE_type(ptr))
#define sk_ASN1_VALUE_find_all(sk, ptr, pnum)
OPENSSL_sk_find_all(ossl_check_ASN1_VALUE_sk_type(sk), ossl_check_ASN1_VALUE_type(ptr), pnum)
#define sk_ASN1_VALUE_sort(sk) OPENSSL_sk_sort(ossl_check_ASN1_VALUE_sk_type(sk))
#define sk_ASN1_VALUE_is_sorted(sk) OPENSSL_sk_is_sorted(ossl_check_const_ASN1_VALUE_sk_type(sk))
#define sk_ASN1_VALUE_dup(sk) ((STACK_OF(ASN1_VALUE)
*)OPENSSL_sk_dup(ossl_check_const_ASN1_VALUE_sk_type(sk)))
#define sk_ASN1_VALUE_deep_copy(sk, copyfunc, freefunc) ((STACK_OF(ASN1_VALUE)
*)OPENSSL_sk_deep_copy(ossl_check_const_ASN1_VALUE_sk_type(sk),
ossl_check_ASN1_VALUE_copyfunc_type(copyfunc), ossl_check_ASN1_VALUE_freefunc_type(freefunc)))
#define sk_ASN1_VALUE_set_cmp_func(sk,
cmp) ((sk_ASN1_VALUE_compfunc)OPENSSL_sk_set_cmp_func(ossl_check_ASN1_VALUE_sk_type(sk),
ossl_check_ASN1_VALUE_compfunc_type(cmp)))

/* Functions used internally by the ASN1 code */

```
int ASN1_item_ex_new(ASN1_VALUE **pval, const ASN1_ITEM *it);
void ASN1_item_ex_free(ASN1_VALUE **pval, const ASN1_ITEM *it);

int ASN1_item_ex_d2i(ASN1_VALUE **pval, const unsigned char **in, long len,
                     const ASN1_ITEM *it, int tag, int aclass, char opt,
                     ASN1_TLC *ctx);

int ASN1_item_ex_i2d(const ASN1_VALUE **pval, unsigned char **out,
                     const ASN1_ITEM *it, int tag, int aclass);

/* Legacy compatibility */
# define IMPLEMENT_ASN1_FUNCTIONS_const(name) IMPLEMENT_ASN1_FUNCTIONS(name)
# define IMPLEMENT_ASN1_ENCODE_FUNCTIONS_const_fname(stname, itname, fname) \
        IMPLEMENT_ASN1_ENCODE_FUNCTIONS_fname(stname, itname, fname)

#ifdef  __cplusplus
}
#endif
#endif
{
 'variables': {
   'openssl_sources': [
     'openssl/crypto/aes/aes_ecb.c',
     'openssl/crypto/aes/aes_misc.c',
     'openssl/crypto/bn/asm/x86_64-gcc.c',
     'openssl/crypto/bn/bn_add.c',
     'openssl/crypto/bn/bn_blind.c',
     'openssl/crypto/bn/bn_const.c',
     'openssl/crypto/bn/bn_conv.c',
     'openssl/crypto/bn/bn_ctx.c',
     'openssl/crypto/bn/bn_dh.c',
     'openssl/crypto/bn/bn_div.c',
     'openssl/crypto/bn/bn_exp.c',
     'openssl/crypto/bn/bn_exp2.c',
     'openssl/crypto/bn/bn_gcd.c',
     'openssl/crypto/bn/bn_gf2m.c',
     'openssl/crypto/bn/bn_intern.c',
     'openssl/crypto/bn/bn_kron.c',
     'openssl/crypto/bn/bn_lib.c',
     'openssl/crypto/bn/bn_mod.c',
     'openssl/crypto/bn/bn_mont.c',
     'openssl/crypto/bn/bn_mpi.c',
     'openssl/crypto/bn/bn_mul.c',
     'openssl/crypto/bn/bn_nist.c',
     'openssl/crypto/bn/bn_prime.c',
     'openssl/crypto/bn/bn_rand.c',
     'openssl/crypto/bn/bn_recp.c',
```

'openssl/crypto/bn/bn_rsa_fips186_4.c',
'openssl/crypto/bn/bn_shift.c',
'openssl/crypto/bn/bn_sqr.c',
'openssl/crypto/bn/bn_sqrt.c',
'openssl/crypto/bn/bn_word.c',
'openssl/crypto/bn/rsaz_exp.c',
'openssl/crypto/bn/rsaz_exp_x2.c',
'openssl/crypto/buffer/buffer.c',
'openssl/crypto/cmac/cmac.c',
'openssl/crypto/des/des_enc.c',
'openssl/crypto/des/ecb3_enc.c',
'openssl/crypto/des/fcrypt_b.c',
'openssl/crypto/des/set_key.c',
'openssl/crypto/dh/dh_backend.c',
'openssl/crypto/dh/dh_check.c',
'openssl/crypto/dh/dh_gen.c',
'openssl/crypto/dh/dh_group_params.c',
'openssl/crypto/dh/dh_kdf.c',
'openssl/crypto/dh/dh_key.c',
'openssl/crypto/dh/dh_lib.c',
'openssl/crypto/dsa/dsa_backend.c',
'openssl/crypto/dsa/dsa_check.c',
'openssl/crypto/dsa/dsa_gen.c',
'openssl/crypto/dsa/dsa_key.c',
'openssl/crypto/dsa/dsa_lib.c',
'openssl/crypto/dsa/dsa_ossl.c',
'openssl/crypto/dsa/dsa_sign.c',
'openssl/crypto/dsa/dsa_vrf.c',
'openssl/crypto/ec/curve448/arch_32/f_impl32.c',
'openssl/crypto/ec/curve448/arch_64/f_impl64.c',
'openssl/crypto/ec/curve448/curve448.c',
'openssl/crypto/ec/curve448/curve448_tables.c',
'openssl/crypto/ec/curve448/eddsa.c',
'openssl/crypto/ec/curve448/f_generic.c',
'openssl/crypto/ec/curve448/scalar.c',
'openssl/crypto/ec/curve25519.c',
'openssl/crypto/ec/ec2_oct.c',
'openssl/crypto/ec/ec2_smpl.c',
'openssl/crypto/ec/ec_asn1.c',
'openssl/crypto/ec/ec_backend.c',
'openssl/crypto/ec/ec_check.c',
'openssl/crypto/ec/ec_curve.c',
'openssl/crypto/ec/ec_cvt.c',
'openssl/crypto/ec/ec_key.c',
'openssl/crypto/ec/ec_kmeth.c',
'openssl/crypto/ec/ec_lib.c',
'openssl/crypto/ec/ec_mult.c',
'openssl/crypto/ec/ec_oct.c',

'openssl/crypto/ec/ecdh_kdf.c',
'openssl/crypto/ec/ecdh_ossl.c',
'openssl/crypto/ec/ecdsa_ossl.c',
'openssl/crypto/ec/ecdsa_sign.c',
'openssl/crypto/ec/ecdsa_vrf.c',
'openssl/crypto/ec/ecp_mont.c',
'openssl/crypto/ec/ecp_nist.c',
'openssl/crypto/ec/ecp_nistz256.c',
'openssl/crypto/ec/ecp_oct.c',
'openssl/crypto/ec/ecp_smpl.c',
'openssl/crypto/ec/ecx_backend.c',
'openssl/crypto/ec/ecx_key.c',
'openssl/crypto/evp/asymcipher.c',
'openssl/crypto/evp/dh_support.c',
'openssl/crypto/evp/digest.c',
'openssl/crypto/evp/ec_support.c',
'openssl/crypto/evp/evp_enc.c',
'openssl/crypto/evp/evp_fetch.c',
'openssl/crypto/evp/evp_lib.c',
'openssl/crypto/evp/evp_rand.c',
'openssl/crypto/evp/evp_utils.c',
'openssl/crypto/evp/exchange.c',
'openssl/crypto/evp/kdf_lib.c',
'openssl/crypto/evp/kdf_meth.c',
'openssl/crypto/evp/kem.c',
'openssl/crypto/evp/keymgmt_lib.c',
'openssl/crypto/evp/keymgmt_meth.c',
'openssl/crypto/evp/m_sigver.c',
'openssl/crypto/evp/mac_lib.c',
'openssl/crypto/evp/mac_meth.c',
'openssl/crypto/evp/p_lib.c',
'openssl/crypto/evp/pmeth_check.c',
'openssl/crypto/evp/pmeth_gn.c',
'openssl/crypto/evp/pmeth_lib.c',
'openssl/crypto/evp/signature.c',
'openssl/crypto/ffc/ffc_backend.c',
'openssl/crypto/ffc/ffc_dh.c',
'openssl/crypto/ffc/ffc_key_generate.c',
'openssl/crypto/ffc/ffc_key_validate.c',
'openssl/crypto/ffc/ffc_params.c',
'openssl/crypto/ffc/ffc_params_generate.c',
'openssl/crypto/ffc/ffc_params_validate.c',
'openssl/crypto/hmac/hmac.c',
'openssl/crypto/lhash/lhash.c',
'openssl/crypto/asn1_dsa.c',
'openssl/crypto/bsearch.c',
'openssl/crypto/context.c',
'openssl/crypto/core_algorithm.c',

'openssl/crypto/core_fetch.c',
'openssl/crypto/core_namemap.c',
'openssl/crypto/cpuid.c',
'openssl/crypto/cryptlib.c',
'openssl/crypto/ctype.c',
'openssl/crypto/der_writer.c',
'openssl/crypto/ex_data.c',
'openssl/crypto/initthread.c',
'openssl/crypto/o_str.c',
'openssl/crypto/packet.c',
'openssl/crypto/param_build.c',
'openssl/crypto/param_build_set.c',
'openssl/crypto/params.c',
'openssl/crypto/params_dup.c',
'openssl/crypto/params_from_text.c',
'openssl/crypto/provider_core.c',
'openssl/crypto/provider_predefined.c',
'openssl/crypto/self_test_core.c',
'openssl/crypto/sparse_array.c',
'openssl/crypto/threads_lib.c',
'openssl/crypto/threads_none.c',
'openssl/crypto/threads_pthread.c',
'openssl/crypto/threads_win.c',
'openssl/crypto/modes/cbc128.c',
'openssl/crypto/modes/ccm128.c',
'openssl/crypto/modes/cfb128.c',
'openssl/crypto/modes/ctr128.c',
'openssl/crypto/modes/gcm128.c',
'openssl/crypto/modes/ofb128.c',
'openssl/crypto/modes/wrap128.c',
'openssl/crypto/modes/xts128.c',
'openssl/crypto/property/defn_cache.c',
'openssl/crypto/property/property.c',
'openssl/crypto/property/property_parse.c',
'openssl/crypto/property/property_query.c',
'openssl/crypto/property/property_string.c',
'openssl/crypto/rand/rand_lib.c',
'openssl/crypto/rsa/rsa_acvp_test_params.c',
'openssl/crypto/rsa/rsa_backend.c',
'openssl/crypto/rsa/rsa_chk.c',
'openssl/crypto/rsa/rsa_crpt.c',
'openssl/crypto/rsa/rsa_gen.c',
'openssl/crypto/rsa/rsa_lib.c',
'openssl/crypto/rsa/rsa_mp_names.c',
'openssl/crypto/rsa/rsa_none.c',
'openssl/crypto/rsa/rsa_oaep.c',
'openssl/crypto/rsa/rsa_ossl.c',
'openssl/crypto/rsa/rsa_pk1.c',

'openssl/crypto/rsa/rsa_pss.c',
'openssl/crypto/rsa/rsa_schemes.c',
'openssl/crypto/rsa/rsa_sign.c',
'openssl/crypto/rsa/rsa_sp800_56b_check.c',
'openssl/crypto/rsa/rsa_sp800_56b_gen.c',
'openssl/crypto/rsa/rsa_x931.c',
'openssl/crypto/sha/sha1dgst.c',
'openssl/crypto/sha/sha256.c',
'openssl/crypto/sha/sha3.c',
'openssl/crypto/sha/sha512.c',
'openssl/crypto/stack/stack.c',
'openssl/providers/common/der/der_rsa_sig.c',
'openssl/providers/common/bio_prov.c',
'openssl/providers/common/capabilities.c',
'openssl/providers/common/digest_to_nid.c',
'openssl/providers/common/provider_seeding.c',
'openssl/providers/common/provider_util.c',
'openssl/providers/common/securitycheck.c',
'openssl/providers/common/securitycheck_fips.c',
'openssl/providers/fips/fipsprov.c',
'openssl/providers/fips/self_test.c',
'openssl/providers/fips/self_test_kats.c',
'openssl/providers/implementations/asymciphers/rsa_enc.c',
'openssl/providers/implementations/ciphers/cipher_aes.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha1_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_cbc_hmac_sha256_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm.c',
'openssl/providers/implementations/ciphers/cipher_aes_ccm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm.c',
'openssl/providers/implementations/ciphers/cipher_aes_gcm_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb.c',
'openssl/providers/implementations/ciphers/cipher_aes_ocb_hw.c',
'openssl/providers/implementations/ciphers/cipher_aes_wrp.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_fips.c',
'openssl/providers/implementations/ciphers/cipher_aes_xts_hw.c',
'openssl/providers/implementations/ciphers/cipher_cts.c',
'openssl/providers/implementations/ciphers/cipher_tdes.c',
'openssl/providers/implementations/ciphers/cipher_tdes_common.c',
'openssl/providers/implementations/ciphers/cipher_tdes_hw.c',
'openssl/providers/implementations/digests/sha2_prov.c',
'openssl/providers/implementations/digests/sha3_prov.c',
'openssl/providers/implementations/exchange/dh_exch.c',
'openssl/providers/implementations/exchange/ecdh_exch.c',
'openssl/providers/implementations/exchange/ecx_exch.c',
'openssl/providers/implementations/exchange/kdf_exch.c',

'openssl/providers/implementations/kdfs/hkdf.c',
'openssl/providers/implementations/kdfs/kbkdf.c',
'openssl/providers/implementations/kdfs/pbkdf2.c',
'openssl/providers/implementations/kdfs/pbkdf2_fips.c',
'openssl/providers/implementations/kdfs/sshkdf.c',
'openssl/providers/implementations/kdfs/sskdf.c',
'openssl/providers/implementations/kdfs/tls1_prf.c',
'openssl/providers/implementations/kdfs/x942kdf.c',
'openssl/providers/implementations/kem/rsa_kem.c',
'openssl/providers/implementations/keymgmt/dh_kmgmt.c',
'openssl/providers/implementations/keymgmt/dsa_kmgmt.c',
'openssl/providers/implementations/keymgmt/ec_kmgmt.c',
'openssl/providers/implementations/keymgmt/ecx_kmgmt.c',
'openssl/providers/implementations/keymgmt/kdf_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/mac_legacy_kmgmt.c',
'openssl/providers/implementations/keymgmt/rsa_kmgmt.c',
'openssl/providers/implementations/macs/cmac_prov.c',
'openssl/providers/implementations/macs/gmac_prov.c',
'openssl/providers/implementations/macs/hmac_prov.c',
'openssl/providers/implementations/macs/kmac_prov.c',
'openssl/providers/implementations/rands/crngt.c',
'openssl/providers/implementations/rands/drbg.c',
'openssl/providers/implementations/rands/drbg_ctr.c',
'openssl/providers/implementations/rands/drbg_hash.c',
'openssl/providers/implementations/rands/drbg_hmac.c',
'openssl/providers/implementations/rands/test_rng.c',
'openssl/providers/implementations/signature/dsa_sig.c',
'openssl/providers/implementations/signature/ecdsa_sig.c',
'openssl/providers/implementations/signature/eddsa_sig.c',
'openssl/providers/implementations/signature/mac_legacy_sig.c',
'openssl/providers/implementations/signature/rsa_sig.c',
'openssl/ssl/s3_cbc.c',
'openssl/providers/common/der/der_dsa_key.c',
'openssl/providers/common/der/der_dsa_sig.c',
'openssl/providers/common/der/der_ec_key.c',
'openssl/providers/common/der/der_ec_sig.c',
'openssl/providers/common/der/der_ecx_key.c',
'openssl/providers/common/der/der_rsa_key.c',
'openssl/providers/common/provider_ctx.c',
'openssl/providers/common/provider_err.c',
'openssl/providers/implementations/ciphers/ciphercommon.c',
'openssl/providers/implementations/ciphers/ciphercommon_block.c',
'openssl/providers/implementations/ciphers/ciphercommon_ccm.c',
'openssl/providers/implementations/ciphers/ciphercommon_ccm_hw.c',
'openssl/providers/implementations/ciphers/ciphercommon_gcm.c',
'openssl/providers/implementations/ciphers/ciphercommon_gcm_hw.c',
'openssl/providers/implementations/ciphers/ciphercommon_hw.c',
'openssl/providers/implementations/digests/digestcommon.c',

```
  'openssl/ssl/record/tls_pad.c',
  'openssl/providers/fips/fips_entry.c',

],
'openssl_sources_BSD-x86_64': [
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aes-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aesni-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aesni-sha1-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aesni-sha256-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/aesni-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/bsaes-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/aes/vpaes-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/rsaz-avx2.s',
   './config/archs/BSD-x86_64/asm_avx2/crypto/bn/rsaz-avx512.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/rsaz-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/x86_64-gf2m.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/x86_64-mont.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/bn/x86_64-mont5.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/camellia/cmll-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/chacha/chacha-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/ec/ecp_nistz256-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/ec/x25519-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/x86_64cpuid.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/md5/md5-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/modes/aesni-gcm-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/modes/ghash-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/poly1305/poly1305-x86_64.s',
   './config/archs/BSD-x86_64/asm_avx2/crypto/rc4/rc4-md5-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/rc4/rc4-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/keccak1600-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha1-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha1-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha256-mb-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha256-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/sha/sha512-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/crypto/whrlpool/wp-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/engines/e_padlock-x86_64.s',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_sm2_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_digests_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_dsa_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_ec_gen.c',
   './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_ecx_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_rsa_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/common/der/der_wrap_gen.c',
  './config/archs/BSD-x86_64/asm_avx2/providers/legacy.ld',
  './config/archs/BSD-x86_64/asm_avx2/providers/fips.ld',

],
```

```
  'openssl_defines_BSD-x86_64': [
    'NDEBUG',
    'L_ENDIAN',
    'OPENSSL_BUILDING_OPENSSL',
    'AES_ASM',
    'BSAES_ASM',
    'ECP_NISTZ256_ASM',
    'FIPS_MODULE',
    'GHASH_ASM',
    'KECCAK1600_ASM',
    'OPENSSL_BN_ASM_GF2m',
    'OPENSSL_BN_ASM_MONT',
    'OPENSSL_BN_ASM_MONT5',
    'OPENSSL_CPUID_OBJ',
    'OPENSSL_IA32_SSE2',
    'SHA1_ASM',
    'SHA256_ASM',
    'SHA512_ASM',
    'VPAES_ASM',
    'X25519_ASM',
    'FIPS_MODULE',
  ],
  'openssl_cflags_BSD-x86_64': [
    '-Wa,--noexecstack',
     '-Wall -O3',
    '-pthread',
    '-Wall -O3',
  ],
  'openssl_ex_libs_BSD-x86_64': [
    '-pthread',
  ],
  'linker_script': ''
},
'include_dirs': [
  '.',
  './include',
  './crypto',
  './crypto/include/internal',
  './providers/common/include',
],
'defines': ['<@(openssl_defines_BSD-x86_64)'],
'cflags': ['<@(openssl_cflags_BSD-x86_64)'],
'libraries': ['<@(openssl_ex_libs_BSD-x86_64)'],

'sources': ['<@(openssl_sources)', '<@(openssl_sources_BSD-x86_64)'],
'direct_dependent_settings': {
  'include_dirs': ['./include', '.'],
  'defines': ['<@(openssl_defines_BSD-x86_64)'],
```

},
}
Copyright (c) 2011:
Tim Koschtzki (tim@debuggable.com)
Felix Geisendrfer (felix@debuggable.com)

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF
CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.
The MIT License (MIT)

Copyright (c) Shannon Moeller <me@shannonmoeller.com> (shannonmoeller.com)

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR
COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER
IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
PCRE LICENCE

PCRE is a library of functions to support regular expressions whose syntax
and semantics are as close as possible to those of the Perl 5 language.

Release 7 of PCRE is distributed under the terms of the "BSD" licence, as
specified below. The documentation for PCRE, supplied in the "doc"
directory, is distributed under the same terms as the software itself.

The basic library functions are written in C and are freestanding. Also
included in the distribution is a set of C++ wrapper functions.

THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel
Email local part: ph10
Email domain: cam.ac.uk

University of Cambridge Computing Service,
Cambridge, England.

Copyright (c) 1997-2007 University of Cambridge
All rights reserved.

THE C++ WRAPPER FUNCTIONS

Contributed by: Google Inc.

Copyright (c) 2007, Google Inc.
All rights reserved.

THE "BSD" LICENCE

Redistribution and use in
 source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

  * Redistributions of source code must retain the above copyright notice,
    this list of conditions and the following disclaimer.

  * Redistributions in binary form must reproduce the above copyright
    notice, this list of conditions and the following disclaimer in the
    documentation and/or other materials provided with the distribution.

* Neither the name of the University of Cambridge nor the name of Google
Inc. nor the names of their contributors may be used to endorse or
promote products derived from this software without specific prior
written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

End
ISC License

Copyright npm, Inc.

Permission to use, copy, modify, and/or distribute this
software for any purpose with or without fee is hereby
granted, provided that the above copyright notice and this
permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND NPM DISCLAIMS ALL
WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO
EVENT SHALL NPM BE LIABLE FOR ANY SPECIAL, DIRECT,
INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS,
WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE
USE OR PERFORMANCE OF THIS SOFTWARE.
/*
* WARNING: do not edit!
* Generated by Makefile from include/openssl/fipskey.h.in
*
* Copyright 2020-2021 The OpenSSL Project Authors. All Rights Reserved.
*
* Licensed under the Apache License 2.0 (the "License"). You may not use
* this file except in compliance with the License. You can obtain a copy
* in the file LICENSE in the source distribution or at
* https://www.openssl.org/source/license.html
*/

```
#ifndef OPENSSL_FIPSKEY_H
# define OPENSSL_FIPSKEY_H
# pragma once

# ifdef  __cplusplus
extern "C" {
# endif

/*
* The FIPS validation HMAC key, usable as an array initializer.
*/
#define FIPS_KEY_ELEMENTS \
  0xf4, 0x55, 0x66, 0x50, 0xac, 0x31, 0xd3, 0x54, 0x61, 0x61, 0x0b, 0xac, 0x4e, 0xd8, 0x1b, 0x1a, 0x18, 0x1b,
0x2d, 0x8a, 0x43, 0xea, 0x28, 0x54, 0xcb, 0xae, 0x22, 0xca, 0x74, 0x56, 0x08, 0x13

/*
* The FIPS validation key, as a string.
*/
#define FIPS_KEY_STRING "f4556650ac31d35461610bac4ed81b1a181b2d8a43ea2854cbae22ca74560813"

# ifdef  __cplusplus
}
# endif

#endif
```

Notice that the following BSD-style license applies to this one
file (valgrind.h) only. The rest of Valgrind is licensed under the
terms of the GNU General Public License, version 2, unless
otherwise indicated. See the COPYING file in the source
distribution for details.

This file is part of Valgrind, a dynamic binary instrumentation
framework.

Copyright (C) 2000-2010 Julian Seward. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.

2. The origin of this software must not be misrepresented; you must
not claim that you wrote the original software. If you use this
software in a product, an acknowledgment
in the product
documentation would be appreciated but is not required.

3. Altered source versions must be plainly marked as such, and must
not be misrepresented as being the original software.

4. The name of the author may not be used to endorse or promote
products derived from this software without specific prior written
permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE,
EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice that the above BSD-style license applies to this one file
(valgrind.h) only. The entire rest of Valgrind is licensed under
the terms of the GNU General Public License, version 2. See the
COPYING file in the source distribution for details.

Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived
from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright (c) Robert Kowalski
All rights reserved.

The BSD License

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.16 pcre2 10.43-r0

1.16.1 Available under license :

PCRE2 LICENCE

Please see the file LICENCE in the PCRE2 distribution for licensing details.

End
PCRE2 LICENCE

PCRE2 is a library of functions to support regular expressions whose syntax
and semantics are as close as possible to those of the Perl 5 language.

Releases 10.00 and above of PCRE2 are distributed under the terms of the "BSD"
licence, as specified below, with one exemption for certain binary
redistributions. The documentation for PCRE2, supplied in the "doc" directory,
is distributed under the same terms as the software itself. The data in the
testdata directory is not copyrighted and is in the public domain.

The basic library functions are written in C and are freestanding. Also
included in the distribution is a just-in-time compiler that can be used to
optimize pattern matching. This is an optional feature that can be omitted when
the library is built.

THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel
Email local part: Philip.Hazel
Email domain: gmail.com

Retired from University of Cambridge Computing Service,
Cambridge,
England.

Copyright (c) 1997-2024 University of Cambridge
All rights reserved.

PCRE2 JUST-IN-TIME COMPILATION SUPPORT

Written by: Zoltan Herczeg
Email local part: hzmester
Email domain: freemail.hu

Copyright(c) 2010-2024 Zoltan Herczeg
All rights reserved.

STACK-LESS JUST-IN-TIME COMPILER

Written by: Zoltan Herczeg
Email local part: hzmester
Email domain: freemail.hu

Copyright(c) 2009-2024 Zoltan Herczeg
All rights reserved.

THE "BSD" LICENCE

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notices,
this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright
notices, this list of conditions and the following disclaimer
in the
documentation and/or other materials provided with the distribution.

* Neither the name of the University of Cambridge nor the names of any
contributors may be used to endorse or promote products derived from this
software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE,
EVEN IF ADVISED OF THE
POSSIBILITY OF SUCH DAMAGE.

EXEMPTION FOR BINARY LIBRARY-LIKE PACKAGES

The second condition in the BSD licence (covering binary redistributions) does
not apply all the way down a chain of software. If binary package A includes
PCRE2, it must respect the condition, but if package B is software that
includes package A, the condition is not imposed on package B unless it uses
PCRE2 independently.

End
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote products
  derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
NOT LIMITED TO, PROCUREMENT
 OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.17 perks 1.0.1

1.17.1 Available under license :

Copyright (C) 2013 Blake Mizerany

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.18 protobuf 1.36.8

1.18.1 Available under license :

Copyright (c) 2018 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.19 github.com/aws/aws-sdk-go-v2/service/internal/endpoint-discovery 1.11.6

1.19.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer

```
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
```

This member is required.
ClientToken *string

// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

```
 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
```

```
        with:
          path: new-ref
          fetch-depth: 0
      - name: Get Diff
        run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }} ${{ github.sha }} > refDiffFiles.txt
      - name: Get Target Files
        run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
      - name: Checkout scancode
        uses: actions/checkout@v2
        with:
          repository: nexB/scancode-toolkit
          path: scancode-toolkit
          fetch-depth: 1
      - name: Set up Python ${{ matrix.python-version }}
         uses: actions/setup-python@v2
        with:
          python-version: ${{ matrix.python-version }}
      # ScanCode
      - name: Self-configure scancode
        working-directory: ./scancode-toolkit
        run: ./scancode --help
      - name: Run Scan code on target
        run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
      - name: Run Scan code on pr ref
        run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
      # compare
      - name: License test
        run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
```

Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd

Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32
```

```
 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
```

```
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
              "target": "smithy.api#String"
           }
        },
        "traits": {
           "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
           "smithy.api#error": "client"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
           "DirectoryId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
              "traits": {
                 "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
              }
           },
           "ActiveDirectorySettings":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP \n\t\t\taddresses, and the credential provider for user administration.</p>"
              }
            },
            "ActiveDirectoryType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
              "traits": {
                "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
          "type": "structure",
          "members": {
            "DomainName": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
              }
            },
            "DomainIpv4List": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 2
                }
              }
            },
            "DomainCredentialsProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for \n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
              "code": 200,
              "method": "POST",
              "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
```

```
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
           }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
```

```
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}

      }
       },
       "com.amazonaws.licensemanagerusersubscriptions#Directory": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
         }
       },
       "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/DisassociateUser"
          },
          "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
```

```
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
    "type": "structure",
    "members": {
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },

    "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance user.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
```

```
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",
```

```
            "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
```

```
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [
              {

                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
```

```
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                   "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

```
true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
```

```
                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
```

```
                "argv": [

            {
                        "ref": "PartitionResult"
                    },
                    "supportsFIPS"
                ]
            },
            true
        ]
    }
],
"rules": [
    {
        "conditions": [],
        "endpoint": {

"url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                "properties": {},
                "headers": {}
            },
            "type": "endpoint"
        }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "error": "FIPS is enabled but this partition does not support FIPS",
    "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
```

```
                {

        "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]

    }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }

                ],
                    "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
```

```
                "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "error": "Invalid Configuration: Missing Region",
      "type": "error"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",

    "UseFIPS": true,
        "UseDualStack": false
      }
```

```
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
 true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
```

```
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
```

```
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
```

```
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
                }
            },
            "LicenseServerEndpointId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
```

```
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
```

```
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
       "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
                }
            },
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>InstanceId</p>\n
</li>\n       </ul>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
         "type": "structure",
          "members": {
            "InstanceSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
 {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
```

```
        },
        "Filters": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoints": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
      },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

         "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
```

```
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
"<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

         "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
```

```
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
```

```
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
     },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
       }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/identity-provider/RegisterIdentityProvider"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
    "type": "structure",
    "members": {
      "IdentityProvider": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
            }
        },

      "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
```

```
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                  "smithy.api#required": {}
                }
              }
            },
            "traits": {
              "smithy.api#output": {}
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
            "type": "operation",
            "input": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
            },
            "output": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
            },
            "errors": [
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
              },
              {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
              }
            ],
            "traits": {
              "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
              "smithy.api#http":
```

```
{
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/identity-provider/UpdateIdentityProviderSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
      "type": "structure",
       "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the identity provider to
update. "
}
},
"UpdateSettings":
{
"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
"traits": {
"smithy.api#documentation": " Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the: \n
\n \n Subnets which you want to add to provision VPC endpoints. \n \n
\n Subnets which you want to remove the VPC endpoints from. \n \n
\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
```

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string
```

```
 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
```

```
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
 err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
```

```
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
```

```
 return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
```

```
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
```

```
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string
```

```
// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string
```

```
 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
```

```
//
the request.
//
// This member is required.
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string
```

```
// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
```

```
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
```

```
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
```

```
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
```

GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE

OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

```
 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
```

```
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:       region,
 ServiceID:
   ServiceID,
 OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
 spanInitializeStart
 InterceptExecution
 RegisterServiceMetadata
 legacyEndpointContextSetter
 SetLogger
 OperationInputValidation
 spanInitializeEnd
 Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
 Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
 Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
 Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
```

CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own
License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider
resource to deregister.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

       "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
```

```
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
```

```
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

    "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
```

```
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
          }
        },
        "SubscriptionProviderUpdateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
          }
        },
        "DualSubscription": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
          }
```

```
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
            "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
```

```
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
```

```
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }

        ],
                        "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "ref": "UseDualStack"
                                            },
                                            true
                                        ]

}
                                ],
                                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                                "type": "error"
                            },
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": {
                                        "ref": "Endpoint"
                                    },
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
```

```
            "type": "tree"

        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "isSet",
                        "argv": [
                            {
                                "ref": "Region"
                            }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {

        "fn": "aws.partition",
                                "argv": [
                                    {
                                        "ref": "Region"
                                    }
                                ],
                                "assign": "PartitionResult"
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {

                                      "ref": "UseFIPS"
                                            },
                                            true
                                        ]
                                    },
                                    {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }

    ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"

        },
                        "supportsFIPS"
                      ]
                    }
                  ]
                },
                {
                  "fn": "booleanEquals",
                  "argv": [
                    true,
                    {
                      "fn": "getAttr",
                      "argv": [

                       {
                          "ref": "PartitionResult"
                        },
                        "supportsDualStack"
                      ]
                    }
                  ]
                }
              ],
              "rules": [
                {
```

```
                "conditions": [],

        "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],

            "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
            "type": "error"
        }
    ],
    "type": "tree"
},
{

    "conditions": [
        {
            "fn": "booleanEquals",
            "argv": [
                {
                    "ref": "UseFIPS"
                },
                true
            ]
        }
    ],
    "rules": [
        {
            "conditions": [
                {
```

```
                "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
                  "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "FIPS is enabled
 but this partition does not support FIPS",
              "type": "error"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
```

```
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "ref": "UseDualStack"
                                            },
                                            true

                                ]
                                    }
                                ],
                                "rules": [
                                    {
                                        "conditions": [
                                            {
                                                "fn": "booleanEquals",
                                                "argv": [
                                                    true,
                                                    {
                                                        "fn": "getAttr",
                                                        "argv": [
                                                            {

                                                                "ref": "PartitionResult"
                                                            },
                                                            "supportsDualStack"
                                                        ]
                                                    }
                                                ]
                                            }
                                        ],
                                        "rules": [
                                            {
                                                "conditions": [],
                                                "rules": [

        {
                                                        "conditions": [],
                                                        "endpoint": {
                                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                            "properties": {},
                                                            "headers": {}
                                                        },
                                                        "type": "endpoint"
                                                    }
                                                ],
                                                "type": "tree"
```

```
                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
],
"type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
```

```
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
        }
```

```
    },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
          }
         },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
```

```
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }

                 },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
```

```
    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
                      }
                    },
                    "params": {
                      "Region": "us-isob-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
                    },
                    "params": {
                      "Region": "us-isob-east-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://example.com"
                      }
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },

          {
                    "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://example.com"
```

```
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "Enabled",
                    "value": "Enabled",
                    "documentation": "Enabled LinuxSubscriptionsDiscovery"
                },
                {
                    "name": "Disabled",
                    "value": "Disabled",
                    "documentation": "Disabled LinuxSubscriptionsDiscovery"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
            "SourceRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "OrganizationIntegration": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
                "traits": {
                    "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
 </p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
 <li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
```

```
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
   <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
          <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListLinuxSubscriptions"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "Subscriptions"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
      "type": "structure",
      "members": {
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

        "traits": {
            "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
```

match a certain subscription's name. \n The valid names for this filter are: \n \n \n \n <code>Subscription</code>\n \n \n \n The valid Operators for this filter are: \n \n \n \n <code>contains</code>\n \n \n \n \n <code>equals</code>\n \n \n \n \n <code>Notequal</code>\n \n \n "
}
},
"MaxResults": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
"traits": {
"smithy.api#documentation": " The maximum items to return in a request. "
}
},
"NextToken": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response. ",
"smithy.api#length": {
"min": 1,
"max": 16384
}
}
}
},
"traits": {
"smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
"type": "structure",
"members": {
"Subscriptions": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
"traits": {
"smithy.api#documentation": " An array that contains subscription objects. "
}
},
"NextToken": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects. "

```
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",
```

```
    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
         },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
```

```
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
            },
            {

        "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
        ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
      },

     {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/subscription/RegisterSubscriptionProvider"
      },
      "smithy.api#idempotent": {}
    }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat
Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
```

```
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
```

```
    "traits": {
      "smithy.api#enum": [
        {
          "name": "InProgress",
          "value": "InProgress",
          "documentation": "InProgress status"
        },
        {
          "name": "Completed",
          "value": "Completed",
          "documentation": "Completed status"
        },
        {
          "name": "Successful",
          "value": "Successful",
          "documentation": "Successful status"
        },
        {
          "name": "Failed",
          "value": "Failed",
          "documentation": "Failed status"
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String",
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        }
      }
    },
    "traits": {
      "smithy.api#length": {
        "min": 1,
        "max": 100
      },
      "smithy.api#uniqueItems": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
      "target": "smithy.api#String"
```

```
        },
        "value": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
"list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
```

```
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
```

```
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
```

```
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
              "method": "DELETE",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
          "type": "structure",

       "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
{}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
```

```
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
                }

    },
            "Status": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,

and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work,

excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions

of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.20 sqlite 3.48.0-r3

1.20.1 Available under license :

The author disclaims copyright to this source code. In place of
a legal notice, here is a blessing:

May you do good and not evil.
May you find forgiveness for yourself and forgive others.
May you share freely, never taking more than you give.

License Information
==========

SQLite Is Public Domain

The SQLite source code, including all of the files in the directories
listed in the bullets below are
[Public Domain](https://sqlite.org/copyright.html).
The authors have submitted written affidavits releasing their work to
the public for any use. Every byte of the public-domain code can be
traced back to the original authors. The files of this repository
that are public domain include the following:

* All of the primary SQLite source code files found in the
  [src/ directory](https://sqlite.org/src/tree/src?type=tree&expand)
* All of the test cases and testing code in the
  [test/ directory](https://sqlite.org/src/tree/test?type=tree&expand)
* All of the SQLite extension source code and test cases in the
  [ext/ directory](https://sqlite.org/src/tree/ext?type=tree&expand)
* All code that ends up in the "sqlite3.c" and "sqlite3.h" build products
  that actually implement

the SQLite RDBMS.
 * All of the code used to compile the
   [command-line interface](https://sqlite.org/cli.html)
 * All of the code used to build various utility programs such as
   "sqldiff", "sqlite3_rsync", and "sqlite3_analyzer".

The public domain source files usually contain a header comment
similar to the following to make it clear that the software is
public domain.

> ~~~
The author disclaims copyright to this source code. In place of
a legal notice, here is a blessing:

 * May you do good and not evil.
 * May you find forgiveness for yourself and forgive others.
 * May you share freely, never taking more than you give.
~~~

Almost every file you find in this source repository will be
public domain. But there are a small number of exceptions:

Non-Public-Domain Code Included With This Source Repository AS A Convenience
---

This repository contains a (relatively) small amount of non-public-domain
code
 used to help implement the configuration and build logic. In other
words, there are some non-public-domain files used to implement:

> ~~~
./configure && make
~~~

In all cases, the non-public-domain files included with this
repository have generous BSD-style licenses. So anyone is free to
use any of the code in this source repository for any purpose, though
attribution may be required to reuse or republish the configure and
build scripts. None of the non-public-domain code ever actually reaches
the build products, such as "sqlite3.c", however, so no attribution is
required to use SQLite itself. The non-public-domain code consists of
scripts used to help compile SQLite. The non-public-domain code is
technically not part of SQLite. The non-public-domain code is
included in this repository as a convenience to developers, so that those
who want to build SQLite do not need to go download a bunch of
third-party build scripts in order to compile SQLite.

Non-public-domain
code included in this respository includes:

* The ["autosetup"](http://msteveb.github.io/autosetup/) configuration
  system that is contained (mostly) the autosetup/ directory, but also
  includes the "./configure" script at the top-level of this archive.
  Autosetup has a separate BSD-style license. See the
  [autosetup/LICENSE](http://msteveb.github.io/autosetup/license/)
  for details.

* There are BSD-style licenses on some of the configuration
  software found in the legacy autoconf/ directory and its
  subdirectories.

The following unix shell command is can be run from the top-level
of this source repository in order to remove all non-public-domain
code:

> ~~~
rm -rf configure autosetup autoconf
~~~

If you unpack this source repository and then run the command above, what
is left will be 100% public domain.
Unless explicitly stated, all files which form part of autosetup
are released under the following license:

---
autosetup - A build environment "autoconfigurator"

Copyright (c) 2010-2011, WorkWare Systems <http://workware.net.au/>

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above
  copyright notice, this list of conditions and the following
  disclaimer in the documentation and/or other materials
  provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE WORKWARE SYSTEMS ``AS IS" AND ANY
EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO,
THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A
PARTICULAR PURPOSE ARE
~~~

DISCLAIMED. IN NO EVENT SHALL WORKWARE
SYSTEMS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF
ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The views and conclusions contained in the software and documentation
are those of the authors and should not be interpreted as representing
official policies, either expressed or implied, of WorkWare Systems.

1.21 github.com/aws/aws-sdk-go-v2/service/dynamodbstreams 1.30.2

1.21.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry

```
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string
```

```
 // Product name.
 //
 // This member is required.
 ProductName *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // Date and time range during which the license is valid, in ISO8601-UTC format.
 //
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
```

```
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan
```

```
on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
     # compare
     - name: License test
```

run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning

```
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
```

```
//   - ProductSKU
//
//   - Status
//
//
  - Fingerprint
//
//   - IssuerName
//
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
```

```
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
return &awsmiddleware.RegisterServiceMetadata{
 Region:       region,
 ServiceID:    ServiceID,
 OperationName: "ListReceivedLicenses",
}
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
              "target": "smithy.api#String"
           }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
            "DirectoryId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
                "traits": {
                    "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
                }
            },
            "ActiveDirectorySettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
                }
            },
            "ActiveDirectoryType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
```

```
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 2
                }
              }
            },
            "DomainCredentialsProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for \n\t\t\tuser administration in the Active Directory.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "SELF_MANAGED",
                "value": "SELF_MANAGED",
                "documentation": "SELF_MANAGED type of Active Directory"
              },
              {
                "name": "AWS_MANAGED",
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Arn": {
```

```
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http": {
                "code": 200,
```

```
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
              "smithy.api#required": {}
            }
          },
           "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {
```

```
    "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
```

```
            },

          {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                "smithy.api#required": {}
              }
            },
            "LicenseServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
               "traits": {
                "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
    "type": "union",
    "members": {
        "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
                "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
        }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
      "type": "structure",
      "members": {
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
        {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
```

<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) that identifies the identity
provider to deregister. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the results of an identity provider
operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}

}
},
"com.amazonaws.licensemanagerusersubscriptions#Directory": {
"type": "string",
"traits": {
"smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
}
},
"com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
},
"errors": [

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

        }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the user.</p>"
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
```

```
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
```

```
            "Subnets": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
               "traits": {
                  "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                  "smithy.api#length": {
                     "min": 1
                  },

    "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
         "type": "structure",
         "members": {
            "Attribute": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
               }
            },
            "Operation": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
               }
            },
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
```

```
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                 "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
             "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
 subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "Products": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
                 "traits": {
                    "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                    "smithy.api#required": {}
                }
            },
            "LastStatusCheckDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date of the last status check.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
```

```
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
          },
          "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

      "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
```

```
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

           "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
              "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
```

```
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
            "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
```

```
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [
                  {

                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
```

```
                {
                  "fn": "aws.partition",

                 "argv": [
                    {
                      "ref": "Region"
                    }
                  ],
                  "assign": "PartitionResult"
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },

true
                      ]
                    },
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseDualStack"
                        },
                        true
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {

"fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [
                                {
                                  "ref": "PartitionResult"
                                },
```

```
                                    "supportsFIPS"
                                ]
                            }
                        ]
                    },

                {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                            "fn": "getAttr",
                            "argv": [
                                {
                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                            ]
                        }

            ]
                }
            ],
            "rules": [
                {
                    "conditions": [],
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [

{
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "fn": "getAttr",
                            "argv": [

                {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        },
                        true
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
```

```
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

  }
                ],
                "type": "tree"
              },
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {

      "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsDualStack"
                            ]

       }
                          ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
```

```
                                    },
                                    "type": "endpoint"
                                }

                            ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ]
    },
    "smithy.rules#endpointTests": {
        "testCases": [
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
```

```
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",

"UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
```

```
                {
                  "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS":
true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
                    }
```

```
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
         "UseDualStack": true
      }
    },
    {
```

```
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
 false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
```

```
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                  "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "Missing region",
                "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
              "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
          },
          "HealthStatus": {
            "target":
```

```
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
                }
            },
            "Ipv4Address": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
                }
```

```
            },
            "LicenseServerEndpointId": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
               }
            },
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
               }
            },
            "LicenseServerEndpointProvisioningStatus": {
               "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
               }
            },
            "LicenseServers": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
               }
            },
            "CreationTime": {
               "target": "smithy.api#Timestamp",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
         "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
         "type": "list",
         "member": {
```

```
      "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "PROVISIONING",
          "value": "PROVISIONING",
          "documentation": ""
        },
        {
          "name": "PROVISIONING_FAILED",

         "value": "PROVISIONING_FAILED",
          "documentation": ""
        },
        {
          "name": "PROVISIONED",
          "value": "PROVISIONED",
          "documentation": ""
        },
        {
          "name": "DELETING",
          "value": "DELETING",
          "documentation": ""
        },
        {
          "name": "DELETION_FAILED",
          "value": "DELETION_FAILED",
          "documentation": ""
        },
        {
          "name": "DELETED",
          "value": "DELETED",
          "documentation": ""
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
      "smithy.api#enum": [
        {
          "name": "HEALTHY",
          "value": "HEALTHY",
```

```
                "documentation": ""
              },
              {
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "IdentityProviderSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
          "type": "structure",
          "members": {
```

```
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
</li>\n       </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                  "smithy.api#required": {}
               }
            },
             "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
```

empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects. "
                }
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": " List the Remote Desktop Services (RDS) License Server endpoints
",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",

```
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
                 "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoints": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
```

```
            }
          },
           "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
```

```
  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n          </li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
               }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
         "type": "structure",

       "members": {
            "ProductUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
```

```
  },
  "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/user/ListUserAssociations"
       },
      "smithy.api#paginated": {
        "inputToken": "NextToken",
        "outputToken": "NextToken",
        "pageSize": "MaxResults",
        "items": "InstanceUserSummaries"
      }
    }
  },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
          }
        },
        "Filters": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

      }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
```

```
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

           "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                "smithy.api#required": {}
              }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
              "target": "smithy.api#String",
              "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
              }
            },
            "SubscriptionEndDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
          "type": "list",
```

```
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
            "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                    "smithy.api#required": {}
                }
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
```

```
            "target": "smithy.api#String",

        "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
      "members": {
        "RdsSalSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
```

```
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
                }
              }
            },
            "traits": {
              "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
            "type": "string",
            "traits": {
              "smithy.api#enum": [
                {
                  "name": "RDS_SAL",
                  "value": "RDS_SAL",
                  "documentation": ""
                }
              ]
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
            "type": "structure",
            "members": {
              "message": {
                "target": "smithy.api#String"
              }
            },
            "traits": {
              "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
              "smithy.api#error": "client"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#Settings": {

        "type": "structure",
            "members": {
              "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                  "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                  "smithy.api#length": {
                    "min": 1
                  },
                  "smithy.api#required": {}
                }
              },
              "SecurityGroupId": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/StartProductSubscription"
            }
          }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
```

```
for whom to start the product \n\t\t\tsubscription.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                 "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

   "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/StopProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
```

```
            },
            "ProductUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
               }
             }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
         "type": "list",
         "member": {
            "target": "smithy.api#String"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
 {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
         }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#Subnets": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String"
    },
    "traits": {
        "smithy.api#length": {
            "min": 0,
            "max": 50
        },
        "smithy.api#sensitive": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResource": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
     },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
```

```
      "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
```

```
            }
          },
          "TagKeys": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
              "smithy.api#httpQuery": "tagKeys",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
          "type": "structure",
           "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
              }
            },
            "UpdateSettings":
 {
              "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
              "traits": {
                "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash

```
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
```

```
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
```

```
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
```

```
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
```

```
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
```

```
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
```

```
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string
```

```
 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
```

```
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
```

```
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
```

```
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
```

```
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
```

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above

copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

```
type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
```

```
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
```

```
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
```

```
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
```

Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },

    {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
```

```
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
```

```
        "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
               "traits": {
                  "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
               }
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
         "type": "structure",
         "members": {
            "AmiId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
               }
            },
            "InstanceID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
               }
            },
            "InstanceType": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The instance type of the resource.</p>"
               }
            },
            "AccountID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager Linux Subscriptions",
                 "arnNamespace": "license-manager-linux-subscriptions",
                "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
```

```
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
```

```
      "Endpoint": {
        "builtIn": "SDK::Endpoint",
        "required": false,
        "documentation": "Override the endpoint used to send this request",
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }

],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
```

```
                                ]

}
                            ],
                            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                            "type": "error"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": {
                                    "ref": "Endpoint"
                                },
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"

                }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "isSet",
                                "argv": [
                                    {
                                        "ref": "Region"
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {

                "fn": "aws.partition",
                                        "argv": [
                                            {
                                                "ref": "Region"
```

```
                }
            ],
            "assign": "PartitionResult"
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {

                      "ref": "UseFIPS"
                        },
                        true
                    ]
                },
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }

],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"

},
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
```

```
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [

                                                     {
                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],

        "rules": [
                                                {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],

                                "type": "tree"
                                        }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
```

```
                                {

                "conditions": [
                                        {
                                           "fn": "booleanEquals",
                                           "argv": [
                                              {
                                                 "ref": "UseFIPS"
                                              },
                                              true
                                           ]
                                        }
                                     ],
                                     "rules": [
                                        {
                                           "conditions": [
                                              {

                            "fn": "booleanEquals",
                                                 "argv": [
                                                    {
                                                       "fn": "getAttr",
                                                       "argv": [
                                                          {
                                                             "ref": "PartitionResult"
                                                          },
                                                          "supportsFIPS"
                                                       ]
                                                    },
                                                    true

                                               ]
                                              }
                                           ],
                                           "rules": [
                                              {
                                                 "conditions": [],
                                                 "rules": [
                                                    {
                                                       "conditions": [],
                                                       "endpoint": {
                                                          "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                          "headers": {}
                                                       },
                                                       "type": "endpoint"
```

```
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "FIPS is enabled
but this partition does not support FIPS",
            "type": "error"
        }
    ],
    "type": "tree"
},
{
    "conditions": [
        {
            "fn": "booleanEquals",
            "argv": [
                {
                    "ref": "UseDualStack"
                },
                true

]
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                            "fn": "getAttr",
                            "argv": [
                                {

                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                            ]
                        }
                    ]
                }
```

```
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [

        {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                          "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
                      }
                    ],
                    "type": "tree"

                }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [],
                "endpoint": {
                  "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          }
        ],
```

```
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

  }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
```

```
                }
              },
              {
                "documentation": "Missing region",

              "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
              "name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Instances"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
          "type": "structure",
          "members": {
```

```
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
                <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 16384
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
```

```
        "members": {
            "Instances": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
```

```
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
```

```
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
```

```
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
```

```
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

            "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
             },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
```

```
                "min": 1,
                "max": 100
            }
        }
    },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
        },
        "Type": {
            "target": "smithy.api#String",
            "traits": {

 "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
        },
        "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
```

```
                "value": "INVALID",
                "documentation": "INVALID status"
              },
              {
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
```

```
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
```

```
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web Services resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
      "type": "structure",
```

```
    "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
 {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
```

```
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
```

```
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
```

```
            "smithy.api#error": "client"
        }
    }
  }
}
```

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step

spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.22 github.com/aws/aws-sdk-go-v2/service/internal/checksum 1.8.6

1.22.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart

setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
"context"
"fmt"

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
```

```
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
```

```
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
```

```
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
```

```
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
```

RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

```
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
```

```
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
```

```
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
```

```
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
```

```
{
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n        <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http":
 {
              "code": 200,
              "method": "POST",
              "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
```

```
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
               }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
         "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
             }
         },
         "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
```

```
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS)
license server.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
          "type": "structure",
```

```
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/DeregisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
```

```
    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
        "smithy.api#idempotent": {}
```

```
    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
```

```
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
```

```
            },
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
         "type": "union",
         "members": {
            "ActiveDirectoryIdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
```

```
        "Settings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
          }
        },
        "FailureMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },

    "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
           }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
          }
        },
```

```
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
                }
            },
            "AssociationDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
                }
            },
            "DisassociationDate": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
```

```
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

       "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
```

```
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
```

```
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [
                {

                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": {
                  "ref": "Endpoint"
                },

"properties": {},
                  "headers": {}
                },
              "type": "endpoint"
            }
```

```
        ],
        "type": "tree"
      },
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Region"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "aws.partition",

                "argv": [
                  {
                    "ref": "Region"
                  }
                ],
                "assign": "PartitionResult"
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

true

```
                      ]
                    },
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseDualStack"
                        },
                        true
```

```
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

 "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

            ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
```

```
                    },
                    "type": "endpoint"
                }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

  {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
                                "argv": [

                {
                                        "ref": "PartitionResult"
                                    },
                                    "supportsFIPS"
                                ]
                            },
                            true
                        ]
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"

}
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {

    "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
```

```
                                        "ref": "PartitionResult"
                                    },
                                    "supportsDualStack"
                                ]

        }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }

                    ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

            "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    }
],
"type": "tree"
```

```
            },
            {
              "conditions": [],
              "error": "Invalid Configuration: Missing Region",
              "type": "error"
            }
          ]
        },
        "smithy.rules#endpointTests": {
          "testCases": [
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
              "expect":
{
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
```

```
        "endpoint":
{
            "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
           "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
```

```
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
false,
            "Endpoint": "https://example.com"
```

```
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true,
        "Endpoint": "https://example.com"
       }
    },
    {
      "documentation": "Missing region",
      "expect": {
        "error": "Invalid Configuration: Missing Region"
      }
    }
  ],
```

```
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
              "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The type of license server.</p>"
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
 {
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
              "value": "PROVISIONED",
              "documentation": ""
            },
            {
              "name": "DELETING",
              "value": "DELETING",
              "documentation": ""
            },
            {
              "name": "DELETION_FAILED",
              "value": "DELETION_FAILED",
```

```
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
      "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
```

```
            "ServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "IdentityProviderSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Product</p>\n          </li>\n          <li>\n            <p>DirectoryId</p>\n
</li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {

   "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
```

```
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
```

```
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
           "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"


        }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
```

```
user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

          "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
                }
            },
            "SubscriptionStartDate": {
                "target": "smithy.api#String",
```

```
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",

        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {
```

```
        "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                    "smithy.api#required": {}
                }
            }
        },

        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                "smithy.api#required": {}

             }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
          "type": "structure",
          "members": {
            "ProductUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {

   "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
        "smithy.api#http":
{
          "code": 200,
          "method": "POST",
          "uri": "/user/StopProductSubscription"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
```

```
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
```

```
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
                }
```

```
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
        <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n                <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n        </ul>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
            "AddSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
                    "smithy.api#required":
{}
                }
            },
            "RemoveSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
      }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
```

```
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)
```

```
// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
```

```
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
```

```
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
```

```
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
```

```
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
```

```
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
```

```
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
```

```
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
```

```
    // This member is required.
    DigitalSignatureMethod types.DigitalSignatureMethod

    // License entitlements. Partial checkouts are not supported.
    //
    // This member is required.
    Entitlements []types.EntitlementData

    // Amazon Resource Name (ARN) of the license. The license must use the borrow
    // consumption configuration.
    //
    // This member is required.
    LicenseArn *string

    // Information about constraints.
    CheckoutMetadata []types.Metadata

    // Node ID.
    NodeId *string

    noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

    // Information about constraints.
    CheckoutMetadata []types.Metadata

    // Allowed license entitlements.
    EntitlementsAllowed
    []types.EntitlementData

    // Date and time at which the license checkout expires.
    Expiration *string

    // Date and time at which the license checkout is issued.
    IssuedAt *string

    // Amazon Resource Name (ARN) of the license.
    LicenseArn *string

    // License consumption token.
    LicenseConsumptionToken *string

    // Node ID.
    NodeId *string

    // Signed token.
```

```
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
```

```
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
```

```
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
```

```
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
```

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
```

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
```

```
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
```

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
             }
           }
         },
         "traits": {
           "smithy.api#input": {}
         }
       },
       "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
         "type": "structure",
         "members": {},
         "traits": {
           "smithy.api#output": {}
         }
       },
       "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
         "type": "structure",
         "members": {
           "Name": {
             "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The type of name to filter by.</p>"
              }
           },
           "Values": {
             "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
               "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
             }
           },
           "Operator": {
             "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
             "traits": {
               "smithy.api#documentation": "<p>An operator for filtering results.</p>"
             }
           }
         },
         "traits": {
           "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
         }
       },
       "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
         "type":
```

```
"list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
"<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
```

```
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
              }
            },
            "Status": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
              }
            },
            "StatusMessage": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
              "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
              }
            },
            "HomeRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
          "type": "structure",
          "members": {
            "AmiId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
              }
            },
            "InstanceID": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
        },
        "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
```

```
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
          "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
          },
          "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

     "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
```

```
            "required": false,
            "documentation": "The AWS region used to dispatch the request.",
            "type": "String"
          },
          "UseDualStack": {
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
             "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

```
                        true
                    ]
                }

        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
```

```
{
  "conditions": [
    {
      "fn": "isSet",
      "argv": [
        {
          "ref": "Region"
        }
      ]
    }
  ],
  "rules": [
    {
      "conditions": [
        {

"fn": "aws.partition",
          "argv": [
            {
              "ref": "Region"
            }
          ],
          "assign": "PartitionResult"
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {

            "ref": "UseFIPS"
                },
                true
              ]
            },
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }
```

```
],
                                    "rules": [
                                      {
                                        "conditions": [
                                          {
                                            "fn": "booleanEquals",
                                            "argv": [
                                              true,
                                              {
                                                "fn": "getAttr",
                                                "argv": [
                                                  {
                                                    "ref": "PartitionResult"

                                },
                                                    "supportsFIPS"
                                                  ]
                                                }
                                              ]
                                            },
                                            {
                                              "fn": "booleanEquals",
                                              "argv": [
                                                true,
                                                {
                                                  "fn": "getAttr",
                                                  "argv": [

                                                   {
                                                      "ref": "PartitionResult"
                                                    },
                                                    "supportsDualStack"
                                                  ]
                                                }
                                              ]
                                            }
                                          ],
                                          "rules": [
                                            {
                                              "conditions": [],

        "rules": [
                                                {
                                                  "conditions": [],
                                                  "endpoint": {
                                                    "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                    "properties": {},
```

```
                "headers": {}
              },
              "type": "endpoint"
            }
          ],

      "type": "tree"
        }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

      "type": "error"
    }
  ],
  "type": "tree"
},
{

  "conditions": [
    {
      "fn": "booleanEquals",
      "argv": [
        {
          "ref": "UseFIPS"
        },
        true
      ]
    }
  ],
  "rules": [
    {
      "conditions": [
        {

    "fn": "booleanEquals",
          "argv": [
            {
              "fn": "getAttr",
              "argv": [
                {
                  "ref": "PartitionResult"
                },
                "supportsFIPS"
              ]
```

```
                    },
                    true

                ]
            }
        ],
        "rules": [
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "FIPS is enabled
but this partition does not support FIPS",
        "type": "error"
    }
  ],
  "type": "tree"
},
{
  "conditions": [
    {
      "fn": "booleanEquals",
      "argv": [
        {
          "ref": "UseDualStack"
        },
        true

    ]
    }
```

```
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {

                                            "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "rules": [

    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"

                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
```

```
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ],
        "type": "tree"
    }
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {

      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

    },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
             },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": false
```

```
      }
    },
    {

 "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }

     },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
          }
        },
        "params": {
          "Region": "us-isob-east-1",
          "UseFIPS": true,
          "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },

    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
```

```
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
  "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
          },
          {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
          }
```

```
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
            "SourceRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "OrganizationIntegration": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
                "traits": {
                    "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
                <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
         "type": "structure",
         "members": {
            "Instances": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
               "traits": {
                  "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
```

```
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 16384
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
```

```
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
              "traits": {
                "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
```

```
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
         ],
         "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
               "method": "GET",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
         "type": "structure",
         "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}

               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
         "type": "structure",
         "members": {
            "tags": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
               }
            }
         },
```

```
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {

"name": "Disabled",
          "value": "Disabled",
          "documentation": "Disabled OrganizationIntegration"
        }
      ]
    }
  },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/RegisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
```

```
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            }
          }
         },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          },
          "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the subscription.</p>"
```

```
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
"list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
```

```
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
               "method": "DELETE",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
         "type": "structure",

    "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "tagKeys": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input":
 {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {

 "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/UpdateServiceSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
            "smithy.api#required":
{}
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home Region.</p>"
              }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
```

```
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
               "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
         }
      }
   }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of,

publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and

wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the

Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter

SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step

spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit

1.23 aws-sdk-go-v2-feature-ec2-imds 1.18.6

1.23.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody

```
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string
```

```
// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
//
This member is required.
ClientToken *string

// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange
```

```
 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
```

```
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
```

```
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
```

```
        path: sdkbase
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
```

ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd

Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
```

```
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
```

```
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n         <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
                }
            },
```

```
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
               }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
         "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
             }
         },
         "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current
state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
         },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

       {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
    "type": "union",
```

```
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoint": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
               "traits": {
                  "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
               }
            }
         },
          "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n <p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}

    }
     },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
        "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the user.</p>"
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based subscriptions.</p>"
            }
        },
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
            }
```

```
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
                  "min": 1
                },

    "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Filter": {
          "type": "structure",
          "members": {
            "Attribute": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
              }
            },
            "Operation": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
              }
            },
            "Value": {
              "target": "smithy.api#String",
              "traits":
{
                "smithy.api#documentation": "<p>Value of the filter.</p>"
              }
            }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
```

```
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
```

```
"type": "service",
"version": "2018-05-10",
"operations": [
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
    },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager User Subscriptions",
                "arnNamespace": "license-manager-user-subscriptions",
                "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
                "name": "license-manager-user-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
                "additionalAllowedHeaders": [
                    "*",
                    "content-type",
                    "x-amz-content-sha256",
                    "x-amz-user-agent",
                    "x-amzn-platform-id",
                    "x-amzn-trace-id",
                    "content-length",

             "x-api-key",
                    "authorization",
                    "x-amz-date",
                    "x-amz-security-token",
                    "Access-Control-Allow-Headers",
                    "Access-Control-Allow-Methods",
                    "Access-Control-Allow-Origin"
                ],
                "additionalExposedHeaders": [
                    "x-amzn-errortype",
                    "x-amzn-requestid",
                    "x-amzn-trace-id"
                ]
            },
            "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager User Subscriptions",
            "smithy.rules#endpointRuleSet": {
                "version": "1.0",
                "parameters": {
```

```
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
                    "type": "String"
                }
            },
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Endpoint"
                                }
                            ]
                        }
                     ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
```

```
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [
                  {

                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
```

```
                    "ref": "Region"
                }
            ]
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "aws.partition",

                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ],
                    "assign": "PartitionResult"
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },

true
                            ]
                        },
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
```

```
  "fn": "booleanEquals",
                                        "argv": [
                                          true,
                                          {
                                            "fn": "getAttr",
                                            "argv": [
                                              {
                                                "ref": "PartitionResult"
                                              },
                                              "supportsFIPS"
                                            ]
                                          }
                                        ]
                                      },

                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                          true,
                                          {
                                            "fn": "getAttr",
                                            "argv": [
                                              {
                                                "ref": "PartitionResult"
                                              },
                                              "supportsDualStack"
                                            ]
                                          }

                                ]
                                      }
                                    ],
                                    "rules": [
                                      {
                                        "conditions": [],
                                        "endpoint": {
                                          "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                          "properties": {},
                                          "headers": {}
                                        },
                                        "type": "endpoint"
                                      }

  ],
                                    "type": "tree"
                                  },
                                  {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [

 {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [

{
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

    "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

    }
                            ]
                        }
```

```
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }

                                ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                        "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
```

```
        "smithy.rules#endpointTests": {
          "testCases": [
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
              "expect":
{
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint":
```

```
{
                    "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS":
true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
```

```
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
           "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
           "UseDualStack": false
        }
```

```
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
 false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
```

```
                        "url": "https://example.com"
                    }
                },
                "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                    "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                 }
            },
            {
                "documentation": "Missing region",
                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
      }
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
```

```
            "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
            },
            "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
                }
            },
            "Ipv4Address": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
```

\n\t\t\taddress of the RDS license server endpoint. "
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": " The message associated with the provisioning status, if there is one. "
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": " The ID of the license server endpoint. "
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": " The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server. "
            }
          },
          "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
              "smithy.api#documentation": " The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint "
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": " An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint. "
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": " The timestamp when License Manager created the license server endpoint. "
            }
          }
        },
        "traits": {

```
            "smithy.api#documentation":
"<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "PROVISIONING",
                    "value": "PROVISIONING",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONING_FAILED",

                  "value": "PROVISIONING_FAILED",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONED",
                    "value": "PROVISIONED",
                    "documentation": ""
                },
                {
                    "name": "DELETING",
                    "value": "DELETING",
                    "documentation": ""
                },
                {
                    "name": "DELETION_FAILED",
                    "value": "DELETION_FAILED",
                    "documentation": ""
                },
                {
                    "name": "DELETED",
                    "value": "DELETED",
                    "documentation": ""
                }
```

```
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "HEALTHY",
                    "value": "HEALTHY",
                    "documentation": ""
                },
                {
                    "name": "UNHEALTHY",
                    "value": "UNHEALTHY",
                    "documentation": ""
                },
                {
                    "name": "NOT_APPLICABLE",
                    "value": "NOT_APPLICABLE",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>",
                    "smithy.api#required": {}
                }
            },
            "ServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                    "smithy.api#required": {}
                }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
```

```
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
 {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
                 "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
```

```
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

        "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
```

```
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/user/ListUserAssociations"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
                }
            },
            "NextToken": {
                "target":
 "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

         "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
```

```
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a product for this user.</p>",
            "smithy.api#required": {}
          }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
          }
        },
        "SubscriptionStartDate": {
          "target": "smithy.api#String",
          "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
          }
        },
        "SubscriptionEndDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The end date of a subscription.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                    "smithy.api#required": {}
                }
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration \n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
```

```
      "traits": {
        "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
        "smithy.api#error": "client",
        "smithy.api#httpError": 404
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
```

```
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/StartProductSubscription"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
```

<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}

}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
"traits": {
"smithy.api#documentation": " The tags that apply to the product subscription. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
"type": "structure",
"members": {
"ProductUserSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the start product subscription
operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
},

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
          "smithy.api#http":
 {
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
```

```
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
```

```
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
```

```
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
```

```
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
             "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
                }
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n            <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
```

\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
"traits": {
"smithy.api#documentation": " The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers. ",
"smithy.api#required":
{}
}
},
"RemoveSubnets": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
"traits": {
"smithy.api#documentation": " The ID of one or more subnets to remove. ",
"smithy.api#required": {}
}
},
"SecurityGroupId": {
"target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
"traits": {
"smithy.api#documentation": " A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers. "

```
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
      }
   }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
```

DeleteLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

```
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
```

```
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
```

```
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:
      region,
 ServiceID:     ServiceID,
 OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType
```

```
// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
// This member is required.
ClientToken *string

// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string
```

```
// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
```

```
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
```

```
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData
```

```
 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
```

```
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
```

```
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
```

```
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
```

```
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
```

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER

```
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
```

```
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
```

InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
```

```
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
```

```
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",
```

```
   "traits": {
                    "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
                }
            },
            "ProductCode": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
               "traits": {
                  "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
               }
            },
            "LastUpdatedTime": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
               }
            },
            "SubscriptionName": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
               }
            },
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
```

```
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for \n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
     },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
       "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
```

```
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
```

```
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }

        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]

}
                    ],
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                    "type": "error"
                  },
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": {
                        "ref": "Endpoint"
```

```
                    },
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
```

```
                "ref": "UseFIPS"
                    },
                    true
                ]
                },
                {
                "fn": "booleanEquals",
                "argv": [
                    {
                    "ref": "UseDualStack"
                    },
                    true
                ]
                }

],
            "rules": [
                {
                "conditions": [
                    {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                        "fn": "getAttr",
                        "argv": [
                            {
                            "ref": "PartitionResult"

},
                            "supportsFIPS"
                        ]
                        }
                    ]
                    },
                    {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                        "fn": "getAttr",
                        "argv": [

                        {
                            "ref": "PartitionResult"
                        },
                        "supportsDualStack"
```

```
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {

                "fn": "booleanEquals",
                        "argv": [
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          },
                          true

                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "rules": [
                        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

  "properties": {},
                            "headers": {}
                          },
                          "type": "endpoint"
                        }
                      ],
                      "type": "tree"
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "FIPS is enabled
but this partition does not support FIPS",
                  "type": "error"
```

```
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true

    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {

                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

{
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
```

```
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
],
"type": "tree"
```

```
      }
    ]
  },
  "smithy.rules#endpointTests": {
    "testCases": [
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

    }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {

     "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
```

```
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                  }

            },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                  }
                },
                "params": {
                  "Region": "cn-north-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                  }
                },
                "params": {
                  "Region": "cn-north-1",
                  "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                  }
                 },
                "params": {
```

```
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
        },
        "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

     },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
```

```
        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

        "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "Missing region",

          "expect": {
              "error": "Invalid Configuration: Missing Region"
            }
          }
        ],
        "version": "1.0"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
          <li>\n              <p>\n                <code>DualSubscription</code>\n              </p>\n            </li>\n
```

\n \n <code>InstanceID</code>\n \n \n \n \n <code>InstanceType</code>\n \n \n \n \n <code>ProductCode</code>\n \n \n \n \n <code>Region</code>\n \n \n \n \n <code>Status</code>\n \n \n \n \n <code>UsageOperation</code>\n \n \n \n For each filter, you can use one of the following <code>Operator</code> values to \n \t\tdefine the behavior of the filter: \n \n \n \n <code>contains</code>\n \n \n \n \n <code>equals</code>\n \n \n \n \n <code>Notequal</code>\n \n \n "
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": " The maximum items to return in a request. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response. ",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": " An array that contains instance objects. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The next token used for paginated responses. When this \n\tfield

isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional
objects. "
}
}
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
},
"errors": [
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
},
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
},
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
}
],
"traits": {
"smithy.api#documentation":
" Lists the Linux subscriptions that have been discovered. If you have linked your\n organization, the returned results will include data aggregated across your accounts in\n Organizations. ",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/subscription/ListLinuxSubscriptions"
},
"smithy.api#idempotent": {},
"smithy.api#paginated": {
"inputToken": "NextToken",
"outputToken": "NextToken",
"pageSize": "MaxResults",
"items": "Subscriptions"
}
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
"type": "structure",
"members": {
"Filters": {

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
              "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
```

```
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
```

```
the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
```

```
        }
      }
    },
    "traits": {
      "smithy.api#input": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
```

```
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

              "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
```

\n\t\t\tthis is the status of the offline token. "
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
            }
          }
        },
        "traits": {
          "smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": " Unable to find the requested Amazon Web Services resource. ",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-

```
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
            },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            }
          }
        },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          },
          "smithy.api#uniqueItems": {}
        }
```

```
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
   "type": "map",
   "key": {
      "target": "smithy.api#String"
   },
   "value": {
      "target": "smithy.api#String"
   }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
   "type": "structure",
   "members": {
      "Name": {
         "target": "smithy.api#String",
         "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
         }
      },
      "Type": {
         "target": "smithy.api#String",
         "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with
Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace.
Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing
from Amazon EC2 or BYOS.</p>"
            }
         },
         "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
               "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
         }
      },
      "traits": {
         "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
   },
   "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

    "member": {
         "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
   },
   "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
```

```
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "ACTIVE",
              "value": "ACTIVE",
              "documentation": "ACTIVE status"
            },
            {
              "name": "INVALID",
              "value": "INVALID",
              "documentation": "INVALID status"
            },
            {
              "name": "PENDING",
              "value": "PENDING",
              "documentation": "PENDING status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
```

```
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
{}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
```

```
from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
             }
          }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
              "message": {
                  "target": "smithy.api#String"
              }
          },
          "traits": {
              "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
              "smithy.api#error": "client"
          }
      }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or

agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning

Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.24 github.com/aws/smithy-go 1.23.0

1.24.1 Available under license :

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY

THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial

revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

1.25 scanelf 1.3.8-r1

1.25.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses
are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission
to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we

want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and

distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program
in object code or executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled
to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are

prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based
on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit
royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute
software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the Program
specifies
a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED
BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING

OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version
2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical
commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

1.26 aws-sdk-go-v2-service-internal-checksum 1.8.6

1.26.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength

```
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
```

```
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
```

```
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string
```

```
// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}
```

```
func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
```

```
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
```

Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader

```
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
  - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
```

```
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
```

```
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
```

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
```

```
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
```

```
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n         <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
                }
            },
```

```
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
            }
        },
        "traits": {

    "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
             }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

       {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
    "type": "union",
```

```
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoint": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
               "traits": {
                  "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
               }
            }
         },
          "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n <p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}

    }
     },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
        "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the user.</p>"
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based subscriptions.</p>"
            }
        },
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
            }
```

```
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
                  "min": 1
                },

    "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Filter": {
          "type": "structure",
          "members": {
            "Attribute": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
              }
            },
            "Operation": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
              }
            },
            "Value": {
              "target": "smithy.api#String",
              "traits":
{
                "smithy.api#documentation": "<p>Value of the filter.</p>"
              }
            }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
```

```
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
           "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
```

```
"type": "service",
"version": "2018-05-10",
"operations": [
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
    },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
    },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
   },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager User Subscriptions",
                "arnNamespace": "license-manager-user-subscriptions",
                "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
                "name": "license-manager-user-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
                "additionalAllowedHeaders": [
                    "*",
                    "content-type",
                    "x-amz-content-sha256",
                    "x-amz-user-agent",
                    "x-amzn-platform-id",
                    "x-amzn-trace-id",
                    "content-length",

             "x-api-key",
                    "authorization",
                    "x-amz-date",
                    "x-amz-security-token",
                    "Access-Control-Allow-Headers",
                    "Access-Control-Allow-Methods",
                    "Access-Control-Allow-Origin"
                ],
                "additionalExposedHeaders": [
                    "x-amzn-errortype",
                    "x-amzn-requestid",
                    "x-amzn-trace-id"
                ]
            },
            "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager User Subscriptions",
            "smithy.rules#endpointRuleSet": {
                "version": "1.0",
                "parameters": {
```

```
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
                    "type": "String"
                }
            },
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Endpoint"
                                }
                            ]
                        }
                     ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
```

```
                    "argv": [
                        {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
                }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
        },
        {
            "conditions": [
                {

                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": {
                    "ref": "Endpoint"
                },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "isSet",
                "argv": [
                    {
```

```
                "ref": "Region"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "aws.partition",

                "argv": [
                  {
                    "ref": "Region"
                  }
                ],
                "assign": "PartitionResult"
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },

true
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
```

```
"fn": "booleanEquals",
                                    "argv": [
                                      true,
                                      {
                                        "fn": "getAttr",
                                        "argv": [
                                          {
                                            "ref": "PartitionResult"
                                          },
                                          "supportsFIPS"
                                        ]
                                      }
                                    ]
                                  },

                                  {
                                    "fn": "booleanEquals",
                                    "argv": [
                                      true,
                                      {
                                        "fn": "getAttr",
                                        "argv": [
                                          {
                                            "ref": "PartitionResult"
                                          },
                                          "supportsDualStack"
                                        ]
                                      }

                                ]
                                  }
                                ],
                                "rules": [
                                  {
                                    "conditions": [],
                                    "endpoint": {
                                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                      "properties": {},
                                      "headers": {}
                                    },
                                    "type": "endpoint"
                                  }

  ],
                                "type": "tree"
                              },
                              {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [

 {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [

{
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

    "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

    }
                            ]
                        }
```

```
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }

                                ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                        "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
```

```
        "smithy.rules#endpointTests": {
          "testCases": [
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
              "expect":
{
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint":
```

```
{
                    "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS":
true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
```

```
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
           "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
           "UseDualStack": false
        }
```

```
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
 false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
```

```
                        "url": "https://example.com"
                    }
                },
                "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                    "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                 }
            },
            {
                "documentation": "Missing region",
                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
      }
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
```

```
            "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
            },
            "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
                }
            },
            "Ipv4Address": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
```

\n\t\t\taddress of the RDS license server endpoint. "
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": " The message associated with the provisioning status, if there is one. "
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": " The ID of the license server endpoint. "
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": " The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server. "
            }
          },
          "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
              "smithy.api#documentation": " The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint "
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": " An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint. "
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": " The timestamp when License Manager created the license server endpoint. "
            }
          }
        },
        "traits": {

```
            "smithy.api#documentation":
"<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "PROVISIONING",
                    "value": "PROVISIONING",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONING_FAILED",

                  "value": "PROVISIONING_FAILED",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONED",
                    "value": "PROVISIONED",
                    "documentation": ""
                },
                {
                    "name": "DELETING",
                    "value": "DELETING",
                    "documentation": ""
                },
                {
                    "name": "DELETION_FAILED",
                    "value": "DELETION_FAILED",
                    "documentation": ""
                },
                {
                    "name": "DELETED",
                    "value": "DELETED",
                    "documentation": ""
                }
```

```
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "HEALTHY",
                    "value": "HEALTHY",
                    "documentation": ""
                },
                {
                    "name": "UNHEALTHY",
                    "value": "UNHEALTHY",
                    "documentation": ""
                },
                {
                    "name": "NOT_APPLICABLE",
                    "value": "NOT_APPLICABLE",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>",
                    "smithy.api#required": {}
                }
            },
            "ServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                    "smithy.api#required": {}
                }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
```

```
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
</li>\n       </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
 {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
                 "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {

   "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
```

```
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

        "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
```

```
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/user/ListUserAssociations"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
 "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {

           "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
```

```
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a product for this user.</p>",
            "smithy.api#required": {}
          }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
          }
        },
        "SubscriptionStartDate": {
          "target": "smithy.api#String",
          "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
          }
        },
        "SubscriptionEndDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The end date of a subscription.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                    "smithy.api#required": {}
                }
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration \n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
```

```
      "traits": {
        "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
        "smithy.api#error": "client",
        "smithy.api#httpError": 404
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
```

```
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/StartProductSubscription"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
```

<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}

}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user for whom to start the product \n\t\t\tsubscription. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
"traits": {
"smithy.api#documentation": " The tags that apply to the product subscription. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
"type": "structure",
"members": {
"ProductUserSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the start product subscription operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
},

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
          "smithy.api#http":
 {
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
```

```
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
```

```
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
```

```
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
```

```
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
```

```
"com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
   "type": "structure",
   "members": {
      "ResourceArn": {
         "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
         "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
         }
      },
      "TagKeys": {
         "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
         "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
             "smithy.api#required": {}
         }
      }
   },
   "traits": {
      "smithy.api#input": {}
   }
},
"com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
   "type": "structure",
   "members": {},
   "traits": {
      "smithy.api#output": {}
   }
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
   "type": "operation",
   "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
   },
   "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
   },
   "errors": [
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

},
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
                }
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n            <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
```

\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
"traits": {
"smithy.api#documentation": " The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers. ",
"smithy.api#required":
{}
}
},
"RemoveSubnets": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
"traits": {
"smithy.api#documentation": " The ID of one or more subnets to remove. ",
"smithy.api#required": {}
}
},
"SecurityGroupId": {
"target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
"traits": {
"smithy.api#documentation": " A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers. "

```
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
      }
    }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
```

```
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
```

```
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
```

DisassociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

```
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string
```

```
 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
```

```
 params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string
```

```
 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
```

```
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
```

```
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
```

```
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
```

```
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType
```

```
 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
```

```
 return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
```

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
```

```
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
```

InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
```

```
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
           "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of name to filter by.</p>"
           }
        },
        "Values": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
          }
        },
        "Operator": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
          "traits": {
            "smithy.api#documentation": "<p>An operator for filtering results.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

        "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
```

```
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
```

```
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
              "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
          },
          "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
```

```
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
      "type": "service",
      "version": "2018-05-10",
      "operations": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
         },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region": {
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
                     "type": "Boolean"
                },
```

```
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }

        ],
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [],
                  "rules": [
                    {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"

        }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
```

```
                {
                  "conditions": [
                    {

            "fn": "aws.partition",
                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {

                        "ref": "UseFIPS"
                            },
                            true
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {
                              "ref": "UseDualStack"
                            },
                            true
                          ]
                        }

],
                      "rules": [
                        {
                          "conditions": [
                            {
                              "fn": "booleanEquals",
                              "argv": [
                                true,
                                {
                                  "fn": "getAttr",
                                  "argv": [
                                    {
```

```
                                        "ref": "PartitionResult"

                    },
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [

                                     {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {

      "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

            "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [
                      {
                        "conditions": [],
```

```
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled
but this partition does not support FIPS",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true

                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
```

```
                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

        {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ],
 "type": "tree"
 }
 ]
},
"smithy.rules#endpointTests": {
 "testCases": [
  {
   "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
   "expect": {
    "endpoint": {
     "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

 }
   },
   "params": {
    "Region": "us-east-1",
    "UseFIPS": true,
    "UseDualStack": true
   }
  },
  {
   "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
   "expect": {
    "endpoint": {
     "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
    }
   },
   "params": {
    "Region": "us-east-1",
```

```
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {

    "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                }

    },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
```

```
"documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                      }
                     },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": true
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {

 "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                      }
                    },
                    "params": {
                      "Region": "us-gov-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

     },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }

        },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

  "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
          },
          "params": {
            "Region": "us-isob-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },

    {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {

      "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
```

```
                "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "Missing region",

              "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
              "name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
        "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
            <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
```

```
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional
  objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
```

```
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Subscriptions"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
              },
              "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
              },
              "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                    "min": 1,
                    "max": 16384
```

```
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
          "type": "structure",
          "members": {
            "Subscriptions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
              "traits": {
                "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional objects.</p>"

              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
          "type": "operation",
          "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
          },
          "output": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
          ],
          "traits": {
            "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

     "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
 return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
 nextToken from a previously truncated response.</p>"
              }
            }
          },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
            "RegisteredSubscriptionProviders": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
                "traits": {
                    "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}

              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "EQUAL",
                "value": "Equal",
```

```
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                 "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
```

```
          "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
                }
            },
            "SubscriptionProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
```

```
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
      "type": "list",
      "member": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "InProgress",
                "value": "InProgress",
                "documentation": "InProgress status"
               },
              {
                "name": "Completed",
                "value": "Completed",
                "documentation": "Completed status"
              },
              {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
              },
              {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
              }
            ]
```

```
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#length": {
                    "min": 1,
                    "max": 100
                }
            }
        },
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            },
            "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the subscription.</p>"
                }
            },
            "Type": {
                "target": "smithy.api#String",
                "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
                }
```

```
            },
            "InstanceCount": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
               "traits": {
                  "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
         "type": "list",

       "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "RedHat",
                  "value": "RedHat",
                  "documentation": "RedHat subscription provider namespace"
               }
            ]
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
         "type":
 "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
         "type": "string",
         "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
```

```
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
```

```
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
 {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
```

```
Region.</p>"
                }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their

Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf

of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step

ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization

OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.27 aws-sdk-go-v2-internal-ini 1.8.3

1.27.1 Available under license :

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
```

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData
```

```
// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata
```

```
 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
```

```
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err !=
 nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  OperationSerializer
 Build stack step
  ClientRequestID
  ComputeContentLength
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  Retry
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
```

```
  ComputePayloadHash
  setLegacyContextSigningOptions
  Signing
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  OperationDeserializer
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
```

```
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
     # compare
     - name: License test
       run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err
 != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
{
   "smithy": "2.0",
```

```
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
      "members": {
        "DomainName": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
```

```
                "name": "AWS_MANAGED",
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Arn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
```

subscriptions. \n <note>\n Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as Pending billing status) in Amazon Web Services Billing. For more information, see Viewing your\n\t\t\t\tmonthly charges in the Amazon Web Services Billing User Guide. \n </note>",
"smithy.api#http":
{
"code": 200,
"method": "POST",
"uri": "/user/AssociateUser"
},
"smithy.api#idempotent": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
"type": "structure",
"members": {
"Username": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The user name from the identity provider. ",
"smithy.api#required": {}
}
},
"InstanceId": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The ID of the EC2 instance that provides the user-based subscription. ",
"smithy.api#required": {}
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " The identity provider for the user. ",
"smithy.api#required": {}
}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains information for the user to associate. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",

```
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
```

```
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

        {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                    "smithy.api#required": {}
                }
```

```
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
               }
            },
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
         "type": "union",
         "members": {
            "SecretsManagerCredentialsProvider":
```

```
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
          "smithy.api#http": {
```

```
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
                }
            }
        },
         "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
```

```
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",

           "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory":
{
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest":
{
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the user.</p>"
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based subscriptions.</p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"

              }
            },
            "InstanceUserArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}

          }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation":
 "<p>Value of the filter.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                "traits": {

                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                    "smithy.api#required": {}
                }
```

```
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of the identity provider.</p>",

          "smithy.api#required": {}
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
           }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
            "traits":
{
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList": {

 "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
```

```
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceUserArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
              }

          },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
              }
            },
```

```
            "AssociationDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
               }
            },
            "DisassociationDate": {
               "target": "smithy.api#String",
               "traits": {

            "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server",
             "smithy.api#httpError": 500
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
```

```
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"

    },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
      },
      {

        "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
      },
      {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",
              "x-api-key",

      "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
              "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
```

```
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn":
 "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured
 endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
```

```
"rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseFIPS"
                },
                true
              ]
            }
          ],
          "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
          "type": "error"
        },
        {
          "conditions": [
            {

"fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }
          ],
          "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
          "type": "error"
        },
        {
          "conditions": [],
          "endpoint": {
            "url": {
              "ref": "Endpoint"
            },
            "properties": {},

          "headers": {}
            },
            "type": "endpoint"
          }
        ],
        "type": "tree"
      },
      {
```

```
                "conditions": [
                  {
                    "fn": "isSet",
                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "aws.partition",
                        "argv":
[
                          {
                            "ref": "Region"
                          }
                        ],
                        "assign": "PartitionResult"
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseFIPS"
                              },
                              true

            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseDualStack"
                              },
                              true
                            ]
                          }
                        ],
                        "rules": [
```

```
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",

                "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        }
                      ]
                    },

  {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]
                        }
                      ]

                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
```

```
                "type": "tree"
                            },
                            {
                               "conditions": [],
                               "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                               "type": "error"
                            }
                         ],
                         "type": "tree"
                      },
                      {
                         "conditions": [
                            {
                               "fn": "booleanEquals",
                               "argv": [
                                  {

                     "ref": "UseFIPS"
                                  },
                                  true
                               ]
                            }
                         ],
                         "rules": [
                            {
                               "conditions": [
                                  {
                                     "fn": "booleanEquals",
                                     "argv": [
                                        {
                                           "fn": "getAttr",
                                           "argv": [
                                              {

                                                 "ref": "PartitionResult"
                                              },
                                              "supportsFIPS"
                                           ]
                                        },
                                        true
                                     ]
                                  }
                               ],
                               "rules": [
                                  {
                                     "conditions": [],
```

```
                                    "endpoint": {
                                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",
                                         "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS is enabled but this partition does not support FIPS",
                            "type": "error"
                        }

    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [

                         {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
                                            ]
```

```
                                }

                            ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                             "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "DualStack is enabled but this partition does not support DualStack",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                        "properties": {},
                         "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
}
```

```
        ]
      },
      "smithy.rules#endpointTests": {
        "testCases": [
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint":
{
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,

          "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
```

```
                "endpoint": {

  "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack":
 true
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url":
 "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
              },
              "params": {
```

```
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack":
false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url":
"https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack":
true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "error": "FIPS and DualStack are enabled, but this partition
does not support one or both"
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
```

```
        }
      },

    {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "error": "DualStack is enabled but this partition does not support DualStack"
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },

  "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "error": "FIPS and DualStack are enabled, but this partition does not support one or both"
        },
        "params": {
          "Region": "us-isob-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",

"expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
          }
        },
        "params": {
```

```
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "error": "DualStack is enabled but this partition does not support DualStack"
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,

      "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {

              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
```

```
                    "expect": {
                        "endpoint": {
                            "url": "https://example.com"
                        }
                    },
                    "params": {
                        "UseFIPS": false,
                        "UseDualStack": false,
                        "Endpoint":
"https://example.com"
                    }
                },
                {
                    "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                    "expect": {
                        "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                    },
                    "params": {
                        "Region": "us-east-1",
                        "UseFIPS": true,
                        "UseDualStack": false,
                        "Endpoint": "https://example.com"
                    }
                },
                {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                        "error": "Invalid Configuration: Dualstack and custom endpoint are
not supported"
                    },
                    "params": {
                        "Region": "us-east-1",
                        "UseFIPS": false,
                        "UseDualStack": true,
                        "Endpoint": "https://example.com"
                    }
                },
                {
                    "documentation": "Missing region",
                    "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
```

```
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
      "type": "structure",
      "members": {
        "ProvisioningStatus": {
          "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
           "traits": {
            "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
          }
        },
        "HealthStatus": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
          "traits": {
            "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
          }
        },
        "Ipv4Address": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
 server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
      "type": "structure",
      "members": {
        "IdentityProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
          }
        },
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>"
          }
        },
        "ServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
```

```
            "traits": {
                "smithy.api#documentation":
 "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server
endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation":
 "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {

      "target": "smithy.api#Timestamp",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains details about a network endpoint for a Remote Desktop
Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits":
{
            "smithy.api#enum": [
                {
                    "name": "PROVISIONING",
                    "value": "PROVISIONING",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONING_FAILED",
                    "value": "PROVISIONING_FAILED",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONED",
                    "value": "PROVISIONED",
                    "documentation": ""
                },
                {
                    "name": "DELETING",
                    "value": "DELETING",
                    "documentation": ""
                },
                {
                    "name": "DELETION_FAILED",
                    "value": "DELETION_FAILED",
                    "documentation": ""
                },
                {
```

```
                "name": "DELETED",
                "value": "DELETED",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "HEALTHY",
                "value": "HEALTHY",
                "documentation": ""
              },
              {
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList":
{
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
          "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings for your \n\t\t\tserver.</p>",

              "smithy.api#required": {}
                }
              }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
```

```
            "method": "POST",
            "uri": "/identity-provider/ListIdentityProviders"
          },

         "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "IdentityProviderSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
      <ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
    </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
```

```
        "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                    "smithy.api#required": {}
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {

  "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
             },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
        </li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
      "type": "structure",
      "members": {
        "InstanceSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When
 this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token
\n\t\twith the next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {

            "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits":
{
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
```

\n\tfrom a previously truncated response. "
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
             "traits": {
               "smithy.api#documentation": " An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects. "
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                 "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type":
 "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
```

```
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {

                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"

          }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
          "type": "structure",
          "members": {
            "ProductUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to
```

```
retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

    }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
```

```
        }
      },
      "traits": {

"smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits":
{
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required":
{}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline
 results:</p>\n        <ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n
<p>Username</p>\n            </li>\n            <li>\n                <p>Domain</p>\n            </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
             "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
 empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
 next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
```

```
user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",

                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory
 that contains the user information for the product subscription.</p>"
                }
            },
            "SubscriptionStartDate": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The start date of a subscription.</p>"
              }
            },
            "SubscriptionEndDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
          "type": "structure",
          "members": {
            "RdsSalCredentialsProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
          "type":
 "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
```

<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
",
"smithy.api#required": {}
}
},
"Settings": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
"traits": {
"smithy.api#documentation": " The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
"traits": {
"smithy.api#documentation": " The tags that apply to the identity provider's registration. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the results of an identity provider
operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#ResourceArn": {
"type": "string",
"traits": {
"smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
}
},
"com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider":
{
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
                "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
            "Endpoint": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource
 contains settings to configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {
      "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound
 TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation
servers.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
       },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n        <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/StartProductSubscription"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
          "type":
 "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider of the user.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse":
{
          "type": "structure",
          "members": {
            "ProductUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },

 "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],

    "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An
 object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The
 domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#StringList": {
    "type": "list",
     "member": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#Subnet": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#Subnets": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String"
    },
    "traits": {
        "smithy.api#length": {
            "min": 0,
            "max": 50
        },
        "smithy.api#sensitive": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResource": {

"type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{ResourceArn}"
            },

       "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits":
 {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Tags": {
          "type": "map",
          "key": {
```

```
            "target": "smithy.api#String"
          },
          "value": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }

         },
          "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the
request.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Removes
 tags from a resource.</p>",
            "smithy.api#http": {
              "method": "DELETE",
```

```
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "TagKeys": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
            "traits": {

  "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
```

```
"errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>"
               }
            },
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the
 identity provider to update.</p>"
               }
            },
```

```
        "UpdateSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {

 "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
          "traits": {
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
      "type": "structure",
      "members": {
        "AddSubnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint
 for products that\n\t\t\trequire connectivity to activation servers.</p>",
            "smithy.api#required": {}
          }
        },
        "RemoveSubnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
            "smithy.api#required": {}
```

```
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>Updates the registered identity providers product related configuration settings such as\n\t\t\tthe subnets to
provision VPC endpoints.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil
 {
  return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListLicenses",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string

 // Product name.
 //
 // This member is required.
 ProductName *string

 // Product SKU.
 //
```

```
 // This member is required.
 ProductSKU *string

 // Date and time range during which the license is valid, in ISO8601-UTC format.
 //
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if
err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err
= addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack);
 err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
```

```
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  OperationSerializer
 Build stack step
  ClientRequestID
  ComputeContentLength
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  Retry
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  Signing
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  OperationDeserializer
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
```

```
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
 {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  OperationSerializer
 Build stack step
  ClientRequestID
  ComputeContentLength
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  Retry
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  Signing
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
```

```
 OperationDeserializer
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}
```

```
type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
```

```
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
 return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
 err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
```

```
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata
 {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
```

```
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {
```

```
// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
```

```
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
```

```
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
```

```
}
GetLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  OperationSerializer
 Build stack step
  ClientRequestID
  ComputeContentLength
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  Retry
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  Signing
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  OperationDeserializer
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
ListReceivedLicenses
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
```

```
 spanInitializeEnd
Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 OperationSerializer
Build stack step
 ClientRequestID
 ComputeContentLength
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 Retry
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 Signing
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 OperationDeserializer
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
```

```
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
AssociateLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  OperationSerializer
 Build stack step
  ClientRequestID
  ComputeContentLength
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  Retry
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  Signing
```

Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

       "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
```

```
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
```

```
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

    "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
```

```
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
          }
        },
        "SubscriptionProviderUpdateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
          }
        },
        "DualSubscription": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
          }
```

```
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

      "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
            "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
```

```
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
```

```
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }

        ],
                        "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "ref": "UseDualStack"
                                            },
                                            true
                                        ]

}
                                ],
                                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                                "type": "error"
                            },
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": {
                                        "ref": "Endpoint"
                                    },
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
```

```
            "type": "tree"

        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "isSet",
                        "argv": [
                            {
                                "ref": "Region"
                            }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {

        "fn": "aws.partition",
                                "argv": [
                                    {
                                        "ref": "Region"
                                    }
                                ],
                                "assign": "PartitionResult"
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {

                                      "ref": "UseFIPS"
                                            },
                                            true
                                        ]
                                    },
                                    {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }

  ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"

        },
                                "supportsFIPS"
                            ]
                          }
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [

                             {
                                  "ref": "PartitionResult"
                              },
                              "supportsDualStack"
                            ]
                          }
                        ]
                      }
                    ],
                    "rules": [
                      {
```

```
                "conditions": [],

        "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],

            "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {

        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [
                    {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
```

```
                "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
                  "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "FIPS is enabled
 but this partition does not support FIPS",
              "type": "error"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
```

```
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "ref": "UseDualStack"
                                            },
                                            true

                                ]
                                    }
                                ],
                                "rules": [
                                    {
                                        "conditions": [
                                            {
                                                "fn": "booleanEquals",
                                                "argv": [
                                                    true,
                                                    {
                                                        "fn": "getAttr",
                                                        "argv": [
                                                            {

                                                            "ref": "PartitionResult"
                                                            },
                                                            "supportsDualStack"
                                                        ]
                                                    }
                                                ]
                                            }
                                        ],
                                        "rules": [
                                            {
                                                "conditions": [],
                                                "rules": [

        {
                                                        "conditions": [],
                                                        "endpoint": {
                                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                            "properties": {},
                                                            "headers": {}
                                                        },
                                                        "type": "endpoint"
                                                    }
                                                ],
                                                "type": "tree"
```

```
                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
],
"type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
```

```
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
        }
```

```
    },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
          }
         },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
```

```
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }

                 },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "error": "FIPS and DualStack are enabled, but this partition does not support one or both"
      },
      "params": {

    "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack
```

```
enabled",
                "expect": {
                  "error": "DualStack is enabled but this partition does not support DualStack"
                },
                "params": {
                  "Region": "us-iso-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
                  }
                },
                "params": {
                  "Region": "us-iso-east-1",
                  "UseFIPS":
false,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack enabled",
                "expect": {
                  "error": "FIPS and DualStack are enabled, but this partition does not support one or both"
                },
                "params": {
                  "Region": "us-isob-east-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
                   }
                },
                "params": {
                  "Region": "us-isob-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false
                }
              },
```

```
                {
                  "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "error": "DualStack is enabled but this partition does not support DualStack"
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {

                 "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"
                    }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }

        },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
```

```
                "params": {
                  "UseFIPS": false,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
                }
              },
              {

                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {

"Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "Missing region",
                "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
```

```
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"

            },
            {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings": {
      "type": "structure",
      "members": {
        "SourceRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "OrganizationIntegration": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
          "traits": {
            "smithy.api#documentation":
 "<p>Details if you have enabled resource discovery across your accounts in Organizations.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },

  {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all subscriptions that match a partial string in the \n \t<code>Value</code>, such as <code>us-west</code>.</p>\n          <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n              </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n            <li>\n              <p>\n <code>DualSubscription</code>\n              </p>\n            </li>\n            <li>\n              <p>\n <code>InstanceID</code>\n              </p>\n            </li>\n            <li>\n              <p>\n <code>InstanceType</code>\n              </p>\n            </li>\n            <li>\n              <p>\n <code>ProductCode</code>\n              </p>\n            </li>\n            <li>\n              <p>\n <code>Region</code>\n              </p>\n            </li>\n            <li>\n              <p>\n <code>Status</code>\n              </p>\n            </li>\n            <li>\n              <p>\n <code>UsageOperation</code>\n              </p>\n            </li>\n          </ul>\n          <p>For each filter, you can use one of the following <code>Operator</code>
```

```
values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n          <li>\n            <p>\n
<code>contains</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>equals</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to
 start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 16384
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if
parameters in request increases."
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
          "type": "structure",
          "members": {
            "Instances": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
              "traits": {
                "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
              }
            },
            "NextToken": {

           "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"
              }
            }
          }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n Organizations.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListLinuxSubscriptions"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",

  "items": "Subscriptions"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
      "type": "structure",
      "members": {
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
```

```
match a certain subscription's name.</p>\n        <p>The valid names for this filter are:</p>\n        <ul>\n
<li>\n            <p>\n                <code>Subscription</code>\n            </p>\n        </li>\n        </ul>\n
<p>The
 valid Operators for this filter are:</p>\n        <ul>\n        <li>\n            <p>\n
<code>contains</code>\n            </p>\n        </li>\n        <li>\n            <p>\n
<code>equals</code>\n            </p>\n        </li>\n        <li>\n            <p>\n
<code>Notequal</code>\n            </p>\n        </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis
 the nextToken from a previously truncated response.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 16384
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if
parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
            "Subscriptions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"
                }
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
          "type": "operation",
          "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
          },
          "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>List Bring Your Own License (BYOL) subscription registration
resources for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }

        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }

 },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },

           "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
      },
      "errors": [
        {

     "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
        "smithy.api#http": {
          "method": "GET",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#readonly": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
           "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "EQUAL",
                    "value": "Equal",
                    "documentation": "Equal operator"
                },
                {
                    "name": "NOT_EQUAL",
                    "value": "NotEqual",
                    "documentation": "Not equal operator"
                },
                {
                    "name": "CONTAINS",
                    "value": "Contains",
                    "documentation": "Contains operator"
                }
            ],
            "smithy.api#length": {
                "min": 1,
                "max": 20
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
```

```
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled OrganizationIntegration"
            },
            {
              "name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled OrganizationIntegration"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
         },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"

          },
          "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the
 Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation":
 "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription
provider resource that you registered.</p>"
```

```
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
```

```
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-\\.]{0,63}:secret:[^/]{1,1023}$"
```

```
}
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "InProgress",
          "value": "InProgress",
          "documentation": "InProgress status"
        },
        {
          "name": "Completed",
          "value": "Completed",
          "documentation": "Completed status"
        },
        {
          "name": "Successful",
          "value": "Successful",
          "documentation": "Successful status"
        },
        {
          "name": "Failed",
          "value": "Failed",
          "documentation": "Failed status"
        }
      ]
    }
  },

  "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String",
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        }
      }
    },
    "traits": {
      "smithy.api#length": {
        "min": 1,
        "max": 100
      },
      "smithy.api#uniqueItems": {}
    }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name":
{
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
```

```
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [

 {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",

   "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
       },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
      "type": "structure",
      "members":
{
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }

      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation":
"<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
           "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {

          "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"

       },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required": {}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target":
 "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                 "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
```

```
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }

      },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
ListLicenses
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  spanInitializeEnd
 Serialize stack step
```

spanBuildRequestStart
setOperationInput
ResolveEndpoint
OperationSerializer
Build stack step
ClientRequestID
ComputeContentLength
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
Signing
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
CheckoutLicense
Initialize stack step
spanInitializeStart
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
OperationSerializer
Build stack step
ClientRequestID
ComputeContentLength

UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
Signing
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
DeleteLicense
Initialize stack step
spanInitializeStart
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
OperationSerializer
Build stack step
ClientRequestID
ComputeContentLength
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry

RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
Signing
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
CreateLicense
Initialize stack step
spanInitializeStart
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
OperationSerializer
Build stack step
ClientRequestID
ComputeContentLength
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions

```
 Signing
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 OperationDeserializer
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err !=
 nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region string)
```

```
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "AssociateLicense",
 }
}
```

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

                    Apache License
                  Version 2.0, January 2004
               http://www.apache.org/licenses/

  TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

  1. Definitions.

     "License" shall mean the terms and conditions for use, reproduction,
     and distribution as defined by Sections 1 through 9 of this document.

     "Licensor" shall mean the copyright owner or entity authorized by

the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but

excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the

appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

```
  Unless required by applicable law or agreed to in writing, software
  distributed under the License is distributed on an "AS IS" BASIS,
  WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
  See the License for the specific language governing permissions and
  limitations under the License.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
```

```
//
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err !=
 nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
```

1.28 utmps 0.1.2.3-r2

1.28.1 Available under license :

Copyright (c) 2018-2024 Laurent Bercot <ska-skaware@skarnet.org>

Permission to use, copy, modify, and distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

1.29 libintl 0.22.5-r0

1.29.1 Available under license :

@c The GNU Lesser General Public License.
@center Version 2.1, February 1999

@c This file is intended to be included within another document,
@c hence no sectioning command or @node.

@display
Copyright @copyright{} 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence the
version number 2.1.]
@end display

@subheading Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software---to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some

specially designated software---typically
libraries---of the Free
Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library
or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation
will not be affected by problems that might be
introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative
of the original library. The ordinary
General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the @dfn{Lesser} General Public License because it does @emph{Less} to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the
same job as widely used non-free libraries. In this
case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a ``work based on the library'' and a ``work that uses the library''. The

former
 contains code derived from the library, whereas the latter must
be combined with the library in order to run.

@subheading TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

@enumerate 0
@item
This License Agreement applies to any software library or other program
which contains a notice placed by the copyright holder or other
authorized party saying it may be distributed under the terms of this
Lesser General Public License (also called ``this License''). Each
licensee is addressed as ``you''.

 A ``library'' means a collection of software functions and/or data
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

 The ``Library'', below, refers to any such software library or work
which has been distributed under these terms. A ``work based on the
Library'' means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it,
 either verbatim or with modifications and/or translated
straightforwardly into another language. (Hereinafter, translation is
included without limitation in the term ``modification''.)

 ``Source code'' for a work means the preferred form of the work for
making modifications to it. For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control compilation
and installation of the library.

 Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent of the use of the Library in a tool for
writing it). Whether that is true depends on what the Library does
and what the program that uses the Library does.

@item
You may copy and distribute
 verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any

warranty; and distribute a copy of this License along with the
Library.

You may charge a fee for the physical act of transferring a copy,
and you may at your option offer warranty protection in exchange for a
fee.

@item
You may modify your copy or copies of the Library or any portion
of it, thus forming a work based on the Library, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

@enumerate a
@item
The modified work must itself be a software library.

@item
You must cause the files modified to carry prominent notices
stating that you changed the files and the date of any change.

@item
You must
cause the whole of the work to be licensed at no
charge to all third parties under the terms of this License.

@item
If a facility in the modified Library refers to a function or a
table of data to be supplied by an application program that uses
the facility, other than as an argument passed when the facility
is invoked, then you must make a good faith effort to ensure that,
in the event an application does not supply such function or
table, the facility still operates, and performs whatever part of
its purpose remains meaningful.

(For example, a function in a library to compute square roots has
a purpose that is entirely well-defined independent of the
application. Therefore, Subsection 2d requires that any
application-supplied function or table used by this function must
be optional: if the application does not supply it, the square
root function must still compute square roots.)
@end enumerate

These requirements apply to the modified work as a whole. If
identifiable sections
of that work are not derived from the Library,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those

sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Library, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote
it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition, mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this
 License.

@item
You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library. To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License. (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.) Do not make any other change in
these notices.

 Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

 This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

@item
You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and
 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

 If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not

compelled to copy the source along with the object code.

@item
A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a ``work that uses the Library''. Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

However, linking a ``work that uses the Library'' with the Library
creates an executable that is a derivative of the Library (because
it
contains portions of the Library), rather than a ``work that uses the
library''. The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

When a ``work that uses the Library'' uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library. The
threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work. (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

Otherwise,
if the work is a derivative of the Library, you may
distribute the object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

@item
As an exception to the Sections above, you may also combine or
link a ``work that uses the Library'' with the Library to produce a
work containing portions of the Library, and distribute that work
under terms of your choice, provided that the terms permit
modification of the work for the customer's own use and reverse
engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the
Library is used in it and that the Library and its use are covered by
this License. You must supply a copy of this License. If the work
during execution displays copyright notices, you must include the

copyright notice for the Library among them, as well as a reference
directing the user to the copy of
 this License. Also, you must do one
of these things:

@enumerate a
@item
Accompany the work with the complete corresponding
machine-readable source code for the Library including whatever
changes were used in the work (which must be distributed under
Sections 1 and 2 above); and, if the work is an executable linked
with the Library, with the complete machine-readable ``work that
uses the Library'', as object code and/or source code, so that the
user can modify the Library and then relink to produce a modified
executable containing the modified Library. (It is understood
that the user who changes the contents of definitions files in the
Library will not necessarily be able to recompile the application
to use the modified definitions.)

@item
Use a suitable shared library mechanism for linking with the Library. A
suitable mechanism is one that (1) uses at run time a copy of the
library already present on the user's computer system, rather than
copying library functions into the executable,
 and (2) will operate
properly with a modified version of the library, if the user installs
one, as long as the modified version is interface-compatible with the
version that the work was made with.

@item
Accompany the work with a written offer, valid for at
least three years, to give the same user the materials
specified in Subsection 6a, above, for a charge no more
than the cost of performing this distribution.

@item
If distribution of the work is made by offering access to copy
from a designated place, offer equivalent access to copy the above
specified materials from the same place.

@item
Verify that the user has already received a copy of these
materials or that you have already sent this user a copy.
@end enumerate

 For an executable, the required form of the ``work that uses the
Library'' must include any data and utility programs needed for
reproducing the executable from it. However, as a special exception,

the materials to be distributed need not include anything that
is
normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

@item
You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

@enumerate a
@item
Accompany the combined library with a copy of the same work based on the Library,
uncombined with any other library
facilities. This must be distributed under the terms of the Sections above.

@item
Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
@end enumerate

@item
You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

@item
You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are

prohibited
 by law if you do not accept this License. Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

@item
Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions. You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.

@item
If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License,
 they do not
excuse you from the conditions of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all. For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software
 distribution system which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to

be a consequence of the rest of this License.

@item
If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

@item
The Free Software Foundation
 may publish revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
``any later version'', you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

@item
If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for
 this. Our
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

@center @b{NO WARRANTY}

@item
BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY ``AS IS'' WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME

THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

@item
IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE,
BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.
@end enumerate

@subheading END OF TERMS AND CONDITIONS

@page
@subheading How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change. You can do so by permitting
redistribution under these terms (or, alternatively, under the terms of the
ordinary General Public License).

To apply these terms, attach the following notices to the library. It is
safest to attach them to the start of each source
file to most effectively
convey the exclusion of warranty; and each file should have at least the
``copyright'' line and a pointer to where the full notice is found.

@smallexample
@var{one line to give the library's name and an idea of what it does.}
Copyright (C) @var{year} @var{name of author}

This library is free software; you can redistribute it and/or modify it
under the terms of the GNU Lesser General Public License as published by
the Free Software Foundation; either version 2.1 of the License, or (at
your option) any later version.

This library is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public

License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301,
USA.
@end
 smallexample

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a ``copyright disclaimer'' for the library, if
necessary. Here is a sample; alter the names:

@smallexample
Yoyodyne, Inc., hereby disclaims all copyright interest in the library
`Frob' (a library for tweaking knobs) written by James Random Hacker.

@var{signature of Ty Coon}, 1 April 1990
Ty Coon, President of Vice
@end smallexample

That's all there is to it!
The libasprintf package is under the LGPL, see file COPYING.LIB.
This subpackage is under the GPL, see file COPYING in the toplevel directory.
@c The GNU General Public License.
@center Version 2, June 1991

@c This file is intended to be included within another document,
@c hence no sectioning command or @node.

@display
Copyright @copyright{} 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
@end display

@heading Preamble

 The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software---to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it

to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect
your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

@heading TERMS AND
CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

@enumerate 0
@item
This License applies to any program or other work which contains

a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The ``Program'', below,
refers to any such program or work, and a ``work based on the Program''
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term ``modification''.)  Each licensee is addressed as ``you''.

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been
 made by running the Program).
Whether that is true depends on what the Program does.

@item
You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

@item
You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

@enumerate a
@item
You must cause the modified files to carry prominent notices
stating
 that you changed the files and the date of any change.

@item
You must cause any work that you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

@item

If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)
@end enumerate

These requirements apply to the modified work as
a whole. If
identifiable sections of that work are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring
the other work under
the scope of this License.

@item
You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

@enumerate a
@item
Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

@item
Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your

cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

@item
Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial
 distribution and only if you
received the program in object code or executable form with such
an offer, in accord with Subsection b above.)
@end enumerate

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts
 as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

@item
You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License. Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

@item
You are not required to accept this License, since you have not
signed it. However, nothing else grants you permission to modify or
distribute the Program or its derivative works. These actions are
prohibited by law if you do not accept this License. Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and

all its terms and conditions
for copying, distributing or modifying
the Program or works based on it.

@item
Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

@item
If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute
the Program at all. For example, if a patent
license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system;
it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

@item
If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

@item
The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each
 version is given a distinguishing version number. If the Program
specifies a version number of this License which applies to it and ``any
later version'', you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

@item
If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

@iftex
@heading NO WARRANTY
@end iftex
@ifinfo
@center
 NO WARRANTY

@end ifinfo

@item
BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM ``AS IS'' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF

MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

@item
IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO
 LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.
@end enumerate

@iftex
@heading END OF TERMS AND CONDITIONS
@end iftex
@ifinfo
@center END OF TERMS AND CONDITIONS

@end ifinfo

@page
@heading Appendix: How to Apply These Terms to Your New Programs

 If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

 To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the ``copyright'' line and a pointer to where the full notice is found.

@smallexample
@var{one line to give the program's name
 and a brief idea of what it does.}
Copyright (C) @var{yyyy} @var{name of author}

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.
@end smallexample

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

@smallexample
Gnomovision version
 69, Copyright (C) @var{year} @var{name of author}
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
@end smallexample

The hypothetical commands @samp{show w} and @samp{show c} should show
the appropriate parts of the General Public License. Of course, the
commands you use may be called something other than @samp{show w} and
@samp{show c}; they could even be mouse-clicks or menu items---whatever
suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a ``copyright disclaimer'' for the program, if
necessary. Here is a sample; alter the names:

@example
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

@var{signature of Ty Coon}, 1 April 1989
Ty Coon, President of Vice
@end example

This General
 Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.

Except where otherwise noted in the source code (e.g. the files hash.c,
list.c and the trio files, which are covered by a similar licence but
with different Copyright notices) all the files are:

Copyright (C) 1998-2012 Daniel Veillard. All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is fur-
nished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FIT-
NESS FOR A PARTICULAR PURPOSE
 AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors

who decide to use it. You
can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library,
whether gratis
or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.
^L
Finally,
software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the

ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore
permits such linking only if the
entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it
becomes
a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting
the free library to free
software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The

former contains code derived from the library, whereas the latter must
be combined with the library in
order to run.
^L
GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other
program which contains a notice placed by the copyright holder or
other authorized party saying it may be distributed under the terms of
this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work
which has been distributed under these terms. A "work based on the
Library" means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or translated
straightforwardly
into another language. (Hereinafter, translation is
included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for
making modifications to it. For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control
compilation
and installation of the library.

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent of the use of the Library in a tool for
writing it). Whether that is true depends on what the Library does
and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's
complete source code as you receive it, in
any medium, provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any
warranty; and distribute a copy of this License along with the

Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under
the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and
can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest

your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.
^L
Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it

contains portions of the Library), rather than a
"work that uses the
library". The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute
the object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.
^L
6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified

executable containing the modified Library. (It is understood
that the user who changes the contents of definitions files in the
Library will not necessarily be able to recompile the application
to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the
Library. A suitable mechanism is one that (1) uses at run time a
copy of the library already present on the user's computer system,
rather than copying library functions into the executable, and (2)
will
operate properly with a modified version of the library, if
the user installs one, as long as the modified version is
interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at
least three years, to give the same user the materials
specified in Subsection 6a, above, for a charge no more
than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy
from a designated place, offer equivalent access to copy the above
specified materials from the same place.

e) Verify that the user has already received a copy of these
materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it. However, as a special exception,
the materials to be distributed need not include anything
that is
normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system. Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.
^L
7. You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined
with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited
by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
^L
11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License,
they do not
excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then

the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution
system which is
implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation
may publish revised and/or new
versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.
^L
14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is

copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for
this. Our
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS
PERMITTED ABOVE, BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

^L

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change. You can do so by permitting
redistribution under these terms (or, alternatively, under the terms
of the ordinary General Public License).

To apply these terms, attach the following notices to the library.
It is safest to attach them to the start of each source
file to most
effectively convey the exclusion of warranty; and each file should
have at least the "copyright" line and a pointer to where the full
notice is found.

<one line to give the library's name and a brief idea of what it
does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor,
Boston,
MA 02110-1301, USA

Also add information on how to contact you by electronic and paper
mail.

You should also get your employer (if you work as a programmer) or
your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James
Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
The gettext-runtime package is partially under the LGPL and partially under
the GPL.

The following parts are under the LGPL, see file intl/COPYING.LIB:
- the libintl and libasprintf libraries and their header files,
- the libintl.jar Java library,
- the GNU.Gettext.dll C# library,
- the gettext.sh shells script function library.

The following parts are under the GPL, see file COPYING in the toplevel
directory:

- the _programs_ gettext, ngettext, envsubst,
- the documentation.

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for
software and other kinds of works.

The licenses for most software and other practical works are designed
to take away your freedom to share and change the works. By contrast,
the GNU General Public License is intended to guarantee your freedom to
share and change all versions of a program--to make sure it remains free
software for all its users. We, the Free Software Foundation, use the
GNU General Public License for most of our software; it applies also to
any other work released this way by its authors. You can apply it to
your programs, too.

When we speak of free software, we are referring to
freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
them if you wish), that you receive source code or can get it if you
want it, that you can change the software or use pieces of it in new
free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you
these rights or asking you to surrender the rights. Therefore, you have
certain responsibilities if you distribute copies of the software, or if
you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must pass on to the recipients the same
freedoms that you received. You must make sure that they, too, receive
or can get the source code. And you must show them these terms so they
know their rights.

Developers that use the GNU GPL protect your rights with two steps:
(1)
assert copyright on the software, and (2) offer you this License
giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains

that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand
ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees"
and
"recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy,
is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The
"System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to

control those activities. However, it does not include the work's
System Libraries, or general-purpose tools or generally
available free
programs which are used unmodified in performing those activities but
which are not part of the work. For example, Corresponding Source
includes interface definition files associated with source files for
the work, and the source code for shared libraries and dynamically
linked subprograms that the work is specifically designed to require,
such as by intimate data communication or control flow between those
subprograms and other parts of the work.

The Corresponding Source need not include anything that users
can regenerate automatically from other parts of the Corresponding
Source.

The Corresponding Source for a work in source code form is that
same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of
copyright on the Program, and are irrevocable provided the stated
conditions are met. This License explicitly affirms your unlimited
permission to run the unmodified Program. The output from running a
covered work is
covered by this License only if the output, given its
content, constitutes a covered work. This License acknowledges your
rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not
convey, without conditions so long as your license otherwise remains
in force. You may convey covered works to others for the sole purpose
of having them make modifications exclusively for you, or provide you
with facilities for running those works, provided that you comply with
the terms of this License in conveying all material for which you do
not control copyright. Those thus making or running the covered works
for you must do so exclusively on your behalf, under your direction
and control, on terms that prohibit them from making any copies of
your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under
the conditions stated below. Sublicensing is not allowed;
section 10
makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological

measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately
publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to
"keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not

invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated
place (gratis or for a charge), and offer equivalent access to the
Corresponding Source in
the same way through the same place at no
further charge. You need not require recipients to copy the
Corresponding Source along with the object code. If the place to
copy the object code is a network server, the Corresponding Source
may be on a different server (operated by you or a third party)
that supports equivalent copying facilities, provided you maintain
clear directions next to the object code saying where to find the
Corresponding Source. Regardless of what server hosts the
Corresponding Source, you remain obligated to ensure that it is
available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided
you inform other peers where the object code and Corresponding
Source of the work are being offered to the general public at no
charge under subsection 6d.

A separable portion of the object code, whose source code is excluded
from the Corresponding Source
as a System Library, need not be
included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any
tangible personal property which is normally used for personal, family,
or household purposes, or (2) anything designed or sold for incorporation
into a dwelling. In determining whether a product is a consumer product,
doubtful cases shall be resolved in favor of coverage. For a particular
product received by a particular user, "normally used" refers to a
typical or common use of that class of product, regardless of the status
of the particular user or of the way in which the particular user
actually uses, or expects or is expected to use, the product. A product
is a consumer product regardless of whether the product has substantial
commercial, industrial or non-consumer uses, unless such uses represent
the only significant mode of use of the product.

"Installation Information" for a User Product means any methods,
procedures, authorization
keys, or other information required to install
and execute modified versions of a covered work in that User Product from
a modified version of its Corresponding Source. The information must
suffice to ensure that the continued functioning of the modified object
code is in no case prevented or interfered with solely because
modification has been made.

If you convey an object code work under this section in, or with, or

specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in
ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the
entire Program shall
be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty
or limiting liability differently from the
terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or
author attributions in that material or in the Appropriate Legal
Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or
requiring that modified versions of such material be marked in
reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or
authors of the material; or

e) Declining to grant rights under trademark law for use of some
trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that
material by anyone who conveys the material (or modified versions of
it) with contractual assumptions of liability to the recipient, for
any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further
restrictions" within the meaning of section 10. If the Program as you
received it, or any part of it, contains a notice stating that it is
governed by this License along with a term that is a further
restriction, you may remove that term. If a license document contains
a further restriction but permits relicensing or conveying under this
License, you may add to a covered work material governed by the terms
of that license document, provided that the further restriction does
not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you
must place, in the relevant source files, a statement of the
additional terms that apply to those files, or a notice indicating
where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the
form of a separately written license, or stated as exceptions;
the above
requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly

provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright
holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that

transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For
purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this

License, through a
publicly available network server or other readily accessible means,
then you must either (1) cause the Corresponding Source to be so
available, or (2) arrange to deprive yourself of the benefit of the
patent license for this particular work, or (3) arrange, in a manner
consistent with the requirements of this License, to extend the patent
license to downstream recipients. "Knowingly relying" means you have
actual knowledge that, but for the patent license, your conveying the
covered work in a country, or your recipient's use of the covered work
in a country, would infringe one or more identifiable patents in that
country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or
arrangement, you convey, or propagate by procuring conveyance of, a
covered work, and grant a patent license to some of the parties
receiving the covered work authorizing them to use, propagate, modify
or convey a specific copy of the covered
work, then the patent license
you grant is automatically extended to all recipients of the covered
work and works based on it.

A patent license is "discriminatory" if it does not include within
the scope of its coverage, prohibits the exercise of, or is
conditioned on the non-exercise of one or more of the rights that are
specifically granted under this License. You may not convey a covered
work if you are a party to an arrangement with a third party that is
in the business of distributing software, under which you make payment
to the third party based on the extent of your activity of conveying
the work, and under which the third party grants, to any of the
parties who would receive the covered work from you, a discriminatory
patent license (a) in connection with copies of the covered work
conveyed by you (or copies made from those copies), or (b) primarily
for and in connection with specific products or compilations that
contain the covered work, unless you entered into that arrangement,
or
that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting
any implied license or other defenses to infringement that may
otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot convey a
covered work so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you may

not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT

HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS"
WITHOUT WARRANTY
OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO,
THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM
IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF
ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS
THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY
GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE
USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF
DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD
PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS),
EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF
SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided
above cannot be given local legal effect according to their terms,
reviewing courts shall apply local law that most closely approximates
an absolute waiver of all civil liability in connection with the
Program, unless a warranty or assumption of liability accompanies a
copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
state the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where
the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify

it under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <https://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<https://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want
to do, use the GNU Lesser General
Public License instead of this License. But first, please read
<https://www.gnu.org/philosophy/why-not-lgpl.html>.

1.30 github.com/deckarep/golang-set/v2 2.8.0

1.30.1 Available under license :

Open Source Initiative OSI - The MIT License (MIT):Licensing

The MIT License (MIT)
Copyright (c) 2013 - 2022 Ralph Caraveo (deckarep@gmail.com)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.31 github.com/aws/aws-sdk-go-v2/service/sso 1.29.1

1.31.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

```
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer
```

```
// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
```

```
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
```

```
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
```

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

```
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
  - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
```

```
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
```

```
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
            "DirectoryId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
                "traits": {
                    "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
                }
            },
            "ActiveDirectorySettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
                }
            },
            "ActiveDirectoryType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
```

```
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
```

```
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n <note>\n <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a
```

```
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
```

```
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current
state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
```

```
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
```

```
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
             "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
```

```
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
      "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
            "smithy.api#length": {
              "min": 1
            },

  "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Attribute": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
          }
        },
        "Operation": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
          }
        },
        "Value": {
          "target": "smithy.api#String",
          "traits":
{
            "smithy.api#documentation": "<p>Value of the filter.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
```

```
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                 "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
             "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
```

```
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details \n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
```

```
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
           "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
```

```
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
 },
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
 },
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
},
{
```

```
    "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
            }
          ],
          "traits": {
            "aws.api#service": {
              "sdkId": "License Manager User Subscriptions",
              "arnNamespace": "license-manager-user-subscriptions",
              "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
              "name": "license-manager-user-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
              "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id",
                "content-length",

           "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
              ],
              "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
              ]
            },
            "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager User Subscriptions",
            "smithy.rules#endpointRuleSet": {
              "version": "1.0",
              "parameters": {
                "Region":
{
                  "builtIn": "AWS::Region",
                  "required": false,
                  "documentation": "The AWS region used to dispatch the request.",
```

```
            "type": "String"
        },
        "UseDualStack": {
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
            "type": "Boolean"
        },
        "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
        },
        "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
        }
    },
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Endpoint"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
```

```
                ]
              }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [
              {

                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "endpoint": {
              "url": {
                "ref": "Endpoint"
              },

"properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Region"
                }
              ]
            }
          ],
```

```
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "aws.partition",

                       "argv": [
                            {
                              "ref": "Region"
                            }
                        ],
                        "assign": "PartitionResult"
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseFIPS"
                              },

true
                              ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseDualStack"
                              },
                              true
                            ]
                          }
                        ],
                        "rules": [
                          {
                            "conditions": [
                              {

"fn": "booleanEquals",
                                  "argv": [
                                    true,
                                    {
                                      "fn": "getAttr",
                                      "argv": [
```

```
                                {
                                    "ref": "PartitionResult"
                                },
                                "supportsFIPS"
                            ]
                        }
                    ]
                },

            {
                "fn": "booleanEquals",
                "argv": [
                    true,
                    {
                        "fn": "getAttr",
                        "argv": [
                            {
                                "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                        ]
                    }

        ]
                }
            ],
            "rules": [
                {
                    "conditions": [],
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }

    ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
            "type": "error"
        }
    ],
```

```
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [

{
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "fn": "getAttr",
                                        "argv": [

                {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {

        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
```

```
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

    "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
```

```
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

                            ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect":
```

```
{
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",

    "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                    "endpoint":
{
                        "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
```

```
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint":
{
                "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
        },
        "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
        },
        "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
```

```
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
```

```
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                    "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                 }
            },
            {
                "documentation": "Missing region",
                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
      }
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
      "ProvisioningStatus": {
        "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
        "traits": {
          "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
```

```
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
```

```
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
              }
            },
            "LicenseServerEndpointId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
              }
            },
            "LicenseServerEndpointArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
              }
            },
            "LicenseServerEndpointProvisioningStatus": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
               "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
              }
            },
            "LicenseServers": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
              }
            },
            "CreationTime": {
              "target": "smithy.api#Timestamp",
              "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
          "type": "string"
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
```

```
        "traits": {
          "smithy.api#enum": [
            {
              "name": "HEALTHY",
              "value": "HEALTHY",
              "documentation": ""
            },
            {
              "name": "UNHEALTHY",
              "value": "UNHEALTHY",
              "documentation": ""
            },
            {
              "name": "NOT_APPLICABLE",
              "value": "NOT_APPLICABLE",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>",
              "smithy.api#required": {}
            }
          },
          "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                    "smithy.api#required": {}
                }
            },
             "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
```

```
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
```

```
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
</li>\n        </ul>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
            "InstanceSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
{}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints </p>",
            "smithy.api#http": {
               "code": 200,
```

```
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
             "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
```

```
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
             "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
```

```
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

      }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
          }
        },
        "NextToken": {
          "target":
 "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {

         "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
```

```
user.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
            "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                  "smithy.api#required": {}
               }
            },

        "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                  "smithy.api#required": {}
               }
            },
            "Settings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
               "traits": {
                  "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
               }
```

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
         }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
```

```
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
```

```
                },
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                "smithy.api#required": {}
              }
            }
          },

          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

             "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
```

```
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
```

```
            {

        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
```

```
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "ProductUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
                }
             }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
```

```
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
```

```
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
 {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
```

```
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
           },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "TagKeys": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
              "smithy.api#httpQuery": "tagKeys",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
    }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
```

```
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
```

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {
```

```
 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {
```

```
 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
```

```
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
```

```
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
```

```
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}
```

```
type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
```

```
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string
```

```
 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string
```

```
 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
```

```
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
```

```
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are

met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

```
 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
```

SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },

        {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                 "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
          "type": "structure",
          "members": {},
          "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
```

```
            },
            "SubscriptionProviderSource": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

          "traits": {
                  "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
               }
            },
            "SecretArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
               }
            },
            "SubscriptionProviderStatus": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
               "traits": {
                  "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
               }
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
         "type": "operation",
         "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
         },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/GetServiceSettings"

        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
        },
        "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
        },
        "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
        },
        "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
        },
        "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
```

```
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

   "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your
```

```
instance.</p>"
                }
            },
            "SubscriptionProviderCreateTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
                }
            },
            "SubscriptionProviderUpdateTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
                }
            },
            "DualSubscription": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
                }
            },
            "RegisteredWithSubscriptionProvider": {
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
```

```
        "aws.api#service": {
          "sdkId": "License Manager Linux Subscriptions",
           "arnNamespace": "license-manager-linux-subscriptions",
          "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
```

```
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
        },
        "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
        }
    },
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Endpoint"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }

    ],
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                    "type": "error"
                },
                {
                    "conditions": [],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
```

```
                                {
                                    "ref": "UseDualStack"
                                },
                                true
                            ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
```

```
                "fn": "aws.partition",
                        "argv": [
                          {
                            "ref": "Region"
                          }
                        ],
                        "assign": "PartitionResult"
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {

                          "ref": "UseFIPS"
                              },
                              true
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseDualStack"
                              },
                              true
                            ]
                          }

],
                        "rules": [
                          {
                            "conditions": [
                              {
                                "fn": "booleanEquals",
                                "argv": [
                                  true,
                                  {
                                    "fn": "getAttr",
                                    "argv": [
                                      {
                                        "ref": "PartitionResult"

                },
                                          "supportsFIPS"
```

```
                ]
              }
            ]
          },
          {
            "fn": "booleanEquals",
            "argv": [
              true,
              {
                "fn": "getAttr",
                "argv": [

                 {
                      "ref": "PartitionResult"
                  },
                  "supportsDualStack"
                ]
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [],

    "rules": [
                {
                  "conditions": [],
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                    "properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],

            "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
              "type": "error"
```

```
                }
            ],
            "type": "tree"
        },
        {

    "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

                "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",
```

```
"properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS is enabled
but this partition does not support FIPS",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true


                ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {

                                                "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
```

```
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "rules": [

        {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"

                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
```

```
                        ],
                        "type": "tree"
                      }
                    ],
                    "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ],
            "type": "tree"
          }
        ]
      },
      "smithy.rules#endpointTests": {
        "testCases": [
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
```

```
                {

              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                    }

            },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {

             "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
       },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }

                 },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }
```

```
    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
```

```
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },

        {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                  },
                  "params": {

          "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                  "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                  },
                  "params": {
```

```
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",

                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
      "type": "structure",
      "members": {
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
          <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
```

```
"NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
          "smithy.api#http": {
            "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptions"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n          <p>The valid names for this filter are:</p>\n          <ul>\n              <li>\n                <p>\n                  <code>Subscription</code>\n                </p>\n              </li>\n          </ul>\n          <p>The valid Operators for this filter are:</p>\n          <ul>\n              <li>\n                <p>\n                  <code>contains</code>\n                </p>\n              </li>\n              <li>\n                <p>\n                  <code>equals</code>\n                </p>\n              </li>\n              <li>\n                <p>\n                  <code>Notequal</code>\n                </p>\n              </li>\n          </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
```

```
        "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
            "Subscriptions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional objects.</p>"

                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
```

```
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "RegisteredSubscriptionProviders"
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
         "type": "structure",
         "members": {
            "SubscriptionProviderSources": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
                  "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                  "smithy.api#range": {
                     "min": 1,
                     "max": 100
                  }
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
               }
            }
         },

         "traits": {
            "smithy.api#input": {}
         }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
        "smithy.api#http": {
          "method": "GET",
```

```
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}

            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "EQUAL",
              "value": "Equal",
              "documentation": "Equal operator"
            },
            {
              "name": "NOT_EQUAL",
```

```
                "value": "NotEqual",
                "documentation": "Not equal operator"
            },
            {
                "name": "CONTAINS",
                "value": "Contains",
                "documentation": "Contains operator"
            }
        ],
        "smithy.api#length": {
            "min": 1,
            "max": 20
        }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
            },
            {

"name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
    },
    "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                 "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {

             "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
                }
            },
            "SubscriptionProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
```

Manager currently supports \n\t\t\tRed Hat subscriptions. "
}
},
"SecretArn": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token. "
}
},
"SubscriptionProviderStatus": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
"traits": {
"smithy.api#documentation": " Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token. "
}
},
"SubscriptionProviderStatusMessage": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
}
},
"LastSuccessfulDataRetrievalTime": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
}
}
},
"traits": {
"smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
"type": "list",
"member": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":

```
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
                {
                    "name": "Successful",
                    "value": "Successful",
                    "documentation": "Successful status"
                },
                {
                    "name": "Failed",
                    "value": "Failed",
                    "documentation": "Failed status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
```

```
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with
Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace.
Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing
from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
          "type": "list",

         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "RedHat",
                "value": "RedHat",
                "documentation": "RedHat subscription provider namespace"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
          "type":
 "list",
          "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "ACTIVE",
                "value": "ACTIVE",
```

```
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
```

```
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
 {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work

(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work

or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent

AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID

ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.32 libcap 2.71-r0

1.32.1 Available under license :

/* SPDX-License-Identifier: BSD-3-Clause OR GPL-2.0-only */

Unless otherwise *explicitly* stated, the following text describes the licensed conditions under which the contents of this libcap/cap release may be used and distributed.

The licensed conditions are one or the other of these two Licenses:

- BSD 3-clause

- GPL v2.0

BSD 3-clause:

Redistribution and use in source and binary forms of libcap/cap, with
or without modification, are permitted provided that the following
conditions are met:

1. Redistributions of source code must retain any existing copyright
  notice, and this entire permission notice in its entirety,
  including the disclaimer of warranties.

2. Redistributions in binary form must reproduce all prior and current
  copyright notices, this list of conditions, and the following
  disclaimer in the documentation and/or other materials provided
  with the distribution.

3.
 The name of any author may not be used to endorse or promote
  products derived from this software without their specific prior
  written permission.

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED
WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR(S) BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING,
BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS
OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE
USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.

GPL v2.0:

ALTERNATIVELY, this product may be distributed under the
 terms of the
GNU General Public License (v2.0 - see below), in which case the
provisions of the GNU GPL are required INSTEAD OF the above
restrictions. (This clause is necessary due to a potential conflict
between the GNU GPL and the restrictions contained in a BSD-style
copyright.)

Full text of gpl-2.0.txt:

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses,
in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities
other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the
Program or any portion
of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program
under
these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you;
rather, the intent is to
exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete

machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING

WILL
ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey
the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information
on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author

Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which
makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
/* SPDX-License-Identifier: BSD-3-Clause OR GPL-2.0-only */

Unless otherwise *explicitly* stated, the following text describes the
licensed conditions under which the contents of this libcap/psx release
may be used and distributed.

The licensed conditions are one or the other of these two Licenses:

- BSD 3-clause
- GPL v2.0

BSD 3-clause:

Redistribution and use in source and binary forms of libcap/psx, with
or without modification, are permitted provided that the following
conditions are met:

1. Redistributions of source code must retain any existing copyright
notice, and this entire permission notice in its entirety,
including the disclaimer of warranties.

2. Redistributions in binary form must reproduce all prior and current
copyright notices, this list of conditions, and the following
disclaimer in the documentation and/or other materials provided
with the distribution.

3.
The name of any author may not be used to endorse or promote
products derived from this software without their specific prior
written permission.

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED
WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR(S) BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING,
BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS
OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE
USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.

GPL v2.0:

ALTERNATIVELY, this product may be distributed under the
terms of the
GNU General Public License (v2.0 - see below), in which case the
provisions of the GNU GPL are required INSTEAD OF the above
restrictions. (This clause is necessary due to a potential conflict
between the GNU GPL and the restrictions contained in a BSD-style
copyright.)

Full text of gpl-2.0.txt:

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities
other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the
Program or any portion
of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium

customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further

restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions

of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software
Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL
ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey
the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information
on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program

`Gnomovision' (which
makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
/* SPDX-License-Identifier: BSD-3-Clause OR GPL-2.0-only */

Unless otherwise *explicitly* stated, the following text describes the
licensed conditions under which the contents of this libcap release
may be used and distributed.

The licensed conditions are one or the other of these two Licenses:

- BSD 3-clause
- GPL v2.0

BSD 3-clause:

Redistribution and use in source and binary forms of libcap, with
or without modification, are permitted provided that the following
conditions are met:

1. Redistributions of source code must retain any existing copyright
  notice, and this entire permission notice in its entirety,
  including the disclaimer of warranties.

2. Redistributions in binary form must reproduce all prior and current
  copyright notices, this list of conditions, and the following
  disclaimer in the documentation and/or other materials provided
  with the distribution.

3. The name
 of any author may not be used to endorse or promote
  products derived from this software without their specific prior
  written permission.

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED
WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR(S) BE LIABLE FOR ANY DIRECT, INDIRECT,

INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GPL v2.0:

ALTERNATIVELY, this product may be distributed under the terms of the
GNU General Public License (v2.0 - see below), in which case the provisions of the GNU GPL are required INSTEAD OF the above restrictions.

Full text of gpl-2.0.txt:

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it

in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program
is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of
Section 1
above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those

sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition,
mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily
used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component

itself accompanies the executable.

If
distribution of executable or object code is made by offering
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License. Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

5. You are not required to accept this License, since you have not
signed it. However, nothing else grants you permission to modify or
distribute the Program or its derivative works. These actions are
prohibited by law if you
do not accept this License. Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions. You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions
of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Program at all. For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented
by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals

of
preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING
ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it
starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public
License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
/* SPDX-License-Identifier: BSD-3-Clause OR LGPL-2.0-or-later */

Unless otherwise *explicitly* stated the following text describes the
licensed conditions under which the contents of this module release
may be distributed:

Redistribution and use in source and binary forms of this module, with
or without modification, are permitted provided that the following
conditions are met:

1. Redistributions of source code must retain any existing copyright
  notice, and this entire permission notice in its entirety,
  including the disclaimer of warranties.

2. Redistributions in binary form must reproduce all prior and current
  copyright notices, this list of conditions, and the following
  disclaimer in the documentation and/or other materials provided
  with the distribution.

3. The name of any author may not be used to endorse or promote
  products derived from this software without their specific prior
  written
 permission.

ALTERNATIVELY, this product may be distributed under the terms of the
GNU Library General Public License, in which case the provisions of
the GNU LGPL are required INSTEAD OF the above restrictions. (This
clause is necessary due to a potential conflict between the GNU LGPL
and the restrictions contained in a BSD-style copyright.)

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED
WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR(S) BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING,
BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS
OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE
USE OF THIS SOFTWARE, EVEN IF
 ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.

1.33 logrus 1.9.3

1.33.1 Available under license :

The MIT License (MIT)

Copyright (c) 2014 Simon Eskildsen

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal

in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF
 OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

1.34 libssl3 3.3.4-r0

1.34.1 Available under license :

This software is copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software; you can redistribute it and/or modify it under
the same terms as the Perl 5 programming language system itself.

Terms of the Perl programming language system itself

a) the GNU General Public License as published by the Free
  Software Foundation; either version 1, or (at your option) any
  later version, or
b) the "Artistic License"

--- The GNU General Public License, Version 1, February 1989 ---

This software is Copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software, licensed under:

 The GNU General Public License, Version 1, February 1989

                GNU GENERAL PUBLIC LICENSE
                 Version 1, February 1989

Copyright (C) 1989 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies

of this license document, but changing it is not allowed.

Preamble

The license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of a such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must tell them their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this General Public License and to the absence of any warranty; and give any other recipients of the
Program a copy of this General Public License
along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

a) cause the modified files to carry prominent notices stating that you changed the files and the date of any change; and

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive
use
in the simplest and most usual way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this General Public License.

d) You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring

the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 1 and 2 above provided that you also do one of the following:

a) accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

4. You may not copy, modify, sublicense, distribute or transfer the Program except as expressly provided under this General Public License. Any attempt otherwise to copy, modify, sublicense, distribute or transfer the Program is void, and will automatically terminate your rights to use the Program under this License. However, parties who have received copies, or rights to use copies, from you under this General Public License will not have their licenses terminated so long as such parties remain in full compliance.

5. By copying, distributing or modifying the Program (or any work based on the Program) you indicate your acceptance of this license to do so, and all its terms and conditions.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these

terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein.

7. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of the license which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the license, you may choose any version ever published by the Free Software Foundation.

8. If you wish to incorporate parts of the Program into other free programs whose distribution
conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

9. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

10. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to humanity, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so,
attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) 19yy <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free
Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) 19xx name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your

program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here a sample; alter
 the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the
 program `Gnomovision' (a program to direct compilers to make passes
 at assemblers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

That's all there is to it!

--- The Artistic License 1.0 ---

This software is Copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software, licensed under:

 The Artistic License 1.0

The Artistic License

Preamble

The intent of this document is to state the conditions under which a Package
may be copied, such that the Copyright Holder maintains some semblance of
artistic control over the development of the package, while giving the users of
the package the right to use and distribute the Package in a more-or-less
customary fashion, plus the right to make reasonable modifications.

Definitions:

- "Package" refers to the collection of files distributed by the Copyright
  Holder, and derivatives of that collection
of files created through
  textual modification.
- "Standard Version" refers to such a Package if it has not been modified,
  or has been modified in accordance with the wishes of the Copyright
  Holder.
- "Copyright Holder" is whoever is named in the copyright or copyrights for
  the package.
- "You" is you, if you're thinking about copying or distributing this Package.
- "Reasonable copying fee" is whatever you can justify on the basis of media

cost, duplication charges, time of people involved, and so on. (You will not be required to justify it to the Copyright Holder, but only to the computing community at large as a market that must bear the fee.)
- "Freely Available" means that no fee is charged for the item itself, though there may be fees involved in handling the item. It also means that recipients of the item may redistribute it under the same conditions they received it.

1. You may make and give away verbatim copies of
the source form of the
Standard Version of this Package without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers.

2. You may apply bug fixes, portability fixes and other modifications derived from the Public Domain or from the Copyright Holder. A Package modified in such a way shall still be considered the Standard Version.

3. You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed that file, and provided that you do at least ONE of the following:

a) place your modifications in the Public Domain or otherwise make them Freely Available, such as by posting said modifications to Usenet or an equivalent medium, or placing the modifications on a major archive site such as ftp.uu.net, or by allowing the Copyright Holder to include your modifications in the Standard Version of the Package.

b) use the modified
Package only within your corporation or organization.

c) rename any non-standard executables so the names do not conflict with standard executables, which must also be provided, and provide a separate manual page for each non-standard executable that clearly documents how it differs from the Standard Version.

d) make other distribution arrangements with the Copyright Holder.

4. You may distribute the programs of this Package in object code or executable form, provided that you do at least ONE of the following:

a) distribute a Standard Version of the executables and library files, together with instructions (in the manual page or equivalent) on where to get the Standard Version.

b) accompany the distribution with the machine-readable source of the Package with your modifications.

c) accompany any non-standard executables with their corresponding Standard

Version executables, giving the non-standard executables non-standard names,
and clearly documenting the differences in manual pages (or equivalent), together with instructions on where to get the Standard Version.

d) make other distribution arrangements with the Copyright Holder.

5. You may charge a reasonable copying fee for any distribution of this Package. You may charge any fee you choose for support of this Package. You may not charge a fee for this Package itself. However, you may distribute this Package in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution provided that you do not advertise this Package as a product of your own.

6. The scripts and library files supplied as input to or produced as output from the programs of this Package do not automatically fall under the copyright of this Package, but belong to whomever generated them, and may be sold commercially, and may be aggregated with this Package.

7. C or perl subroutines supplied by you and linked into this Package shall not
be considered part of this Package.

8. The name of the Copyright Holder may not be used to endorse or promote products derived from this software without specific prior written permission.

9. THIS PACKAGE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTIBILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

Apache License
Version 2.0, January 2004
https://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all

other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

1.35 xxhash 2.3.0

1.35.1 Available under license :

Copyright (c) 2016 Caleb Spare

MIT License

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND

NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.36 xz 5.6.3-r1

1.36.1 Available under license :

XZ Utils Licensing
==========

Different licenses apply to different files in this package. Here
is a summary of which licenses apply to which parts of this package:

- liblzma is under the BSD Zero Clause License (0BSD).

- The command line tools xz, xzdec, lzmadec, and lzmainfo are
under 0BSD except that, on systems that don't have a usable
getopt_long, GNU getopt_long is compiled and linked in from the
'lib' directory. The getopt_long code is under GNU LGPLv2.1+.

- The scripts to grep, diff, and view compressed files have been
adapted from GNU gzip. These scripts (xzgrep, xzdiff, xzless,
and xzmore) are under GNU GPLv2+. The man pages of the scripts
are under 0BSD; they aren't based on the man pages of GNU gzip.

- Most of the XZ Utils specific documentation that is in
plain text files (like README, INSTALL, PACKAGERS, NEWS,
and ChangeLog) are under 0BSD unless stated otherwise in
the file itself. The files xz-file-format.txt and
lzma-file-format.xt are in the public domain but may
be distributed under the terms of 0BSD too.

- Translated messages and man pages are under 0BSD except that
some old translations are in the public domain.

- Test files and test code in the 'tests' directory, and
debugging utilities in the 'debug' directory are under
the BSD Zero Clause License (0BSD).

- The GNU Autotools based build system contains files that are
under GNU GPLv2+, GNU GPLv3+, and a few permissive licenses.
These files don't affect the licensing of the binaries being
built.

- The 'extra' directory contains files that are under various
  free software licenses. These aren't built or installed as
  part of XZ Utils.

For the files under the BSD Zero Clause License (0BSD), if
a copyright notice is needed, the following is sufficient:

  Copyright
(C) The XZ Utils authors and contributors

If you copy significant amounts of 0BSD-licensed code from XZ Utils
into your project, acknowledging this somewhere in your software is
polite (especially if it is proprietary, non-free software), but
it is not legally required by the license terms. Here is an example
of a good notice to put into "about box" or into documentation:

  This software includes code from XZ Utils <https://tukaani.org/xz/>.

The following license texts are included in the following files:
- COPYING.0BSD: BSD Zero Clause License
- COPYING.LGPLv2.1: GNU Lesser General Public License version 2.1
- COPYING.GPLv2: GNU General Public License version 2
- COPYING.GPLv3: GNU General Public License version 3

A note about old XZ Utils releases:

  XZ Utils releases 5.4.6 and older and 5.5.1alpha have a
  significant amount of code put into the public domain and
  that obviously remains so. The switch
from public domain to
  0BSD for newer releases was made in Febrary 2024 because
  public domain has (real or perceived) legal ambiguities in
  some jurisdictions.

  There is very little *practical* difference between public
  domain and 0BSD. The main difference likely is that one
  shouldn't claim that 0BSD-licensed code is in the public
  domain; 0BSD-licensed code is copyrighted but available under
  an extremely permissive license. Neither 0BSD nor public domain
  require retaining or reproducing author, copyright holder, or
  license notices when distributing the software. (Compare to,
  for example, BSD 2-Clause "Simplified" License which does have
  such requirements.)

If you have questions, don't hesitate to ask for more information.
The contact information is in the README file.
                GNU GENERAL PUBLIC LICENSE
                 Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.

Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices

stating that you changed the files and the date of any change.

b) You must cause
any work that you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

c) If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work
are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing

or modifying
the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For
example, if a patent
license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to
decide if he or she is willing
to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License

may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing
version number. If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE,
THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR

THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU
General Public License as published by
the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may

be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this
is what you want to do, use the GNU Lesser General
Public License instead of this License.

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to
freedom, not
price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1)
assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand
ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that

is widely used among developers working in that language.

The
"System Libraries" of an executable work include anything, other
than the work as a whole, that (a) is included in the normal form of
packaging a Major Component, but which is not part of that Major
Component, and (b) serves only to enable use of the work with that
Major Component, or to implement a Standard Interface for which an
implementation is available to the public in source code form. A
"Major Component", in this context, means a major essential component
(kernel, window system, and so on) of the specific operating system
(if any) on which the executable work runs, or a compiler used to
produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all
the source code needed to generate, install, and (for an executable
work) run the object code and to modify the work, including scripts to
control those activities. However, it does not include the work's
System Libraries, or general-purpose tools or generally
available free
programs which are used unmodified in performing those activities but
which are not part of the work. For example, Corresponding Source
includes interface definition files associated with source files for
the work, and the source code for shared libraries and dynamically
linked subprograms that the work is specifically designed to require,
such as by intimate data communication or control flow between those
subprograms and other parts of the work.

The Corresponding Source need not include anything that users
can regenerate automatically from other parts of the Corresponding
Source.

The Corresponding Source for a work in source code form is that
same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of
copyright on the Program, and are irrevocable provided the stated
conditions are met. This License explicitly affirms your unlimited
permission to run the unmodified Program. The output from running a
covered work is
covered by this License only if the output, given its
content, constitutes a covered work. This License acknowledges your
rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not
convey, without conditions so long as your license otherwise remains

in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed;
section 10
makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately
publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code;
keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the

terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product

(including a physical distribution medium), accompanied by a
written offer, valid for at least three years
and valid for as
long as you offer spare parts or customer support for that product
model, to give anyone who possesses the object code either (1) a
copy of the Corresponding Source for all the software in the
product that is covered by this License, on a durable physical
medium customarily used for software interchange, for a price no
more than your reasonable cost of physically performing this
conveying of source, or (2) access to copy the
Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the
written offer to provide the Corresponding Source. This
alternative is allowed only occasionally and noncommercially, and
only if you received the object code with such an offer, in accord
with subsection 6b.

d) Convey the object code by offering access from a designated
place (gratis or for a charge), and offer equivalent access to the
Corresponding Source in
the same way through the same place at no
further charge. You need not require recipients to copy the
Corresponding Source along with the object code. If the place to
copy the object code is a network server, the Corresponding Source
may be on a different server (operated by you or a third party)
that supports equivalent copying facilities, provided you maintain
clear directions next to the object code saying where to find the
Corresponding Source. Regardless of what server hosts the
Corresponding Source, you remain obligated to ensure that it is
available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided
you inform other peers where the object code and Corresponding
Source of the work are being offered to the general public at no
charge under subsection 6d.

A separable portion of the object code, whose source code is excluded
from the Corresponding Source
as a System Library, need not be
included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any
tangible personal property which is normally used for personal, family,
or household purposes, or (2) anything designed or sold for incorporation
into a dwelling. In determining whether a product is a consumer product,
doubtful cases shall be resolved in favor of coverage. For a particular
product received by a particular user, "normally used" refers to a

typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the

entire Program shall
be treated as though they were included in this License, to the extent
that they are valid under applicable law. If additional permissions
apply only to part of the Program, that part may be used separately
under those permissions, but the entire Program remains governed by
this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option
remove any additional permissions from that copy, or from any part of
it. (Additional permissions may be written to require their own
removal in certain cases when you modify the work.) You may place
additional permissions on material, added by you to a covered work,
for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you
add to a covered work, you may (if authorized by the copyright holders of
that material) supplement the terms of this License with terms:

a) Disclaiming warranty
or limiting liability differently from the
terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or
author attributions in that material or in the Appropriate Legal
Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or
requiring that modified versions of such material be marked in
reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or
authors of the material; or

e) Declining to grant rights under trademark law for use of some
trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that
material by anyone who conveys the material (or modified versions of
it) with contractual assumptions of liability to the recipient, for
any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further
restrictions" within the meaning of section 10. If the Program as you
received it, or any part of it, contains a notice stating that it is
governed by this License along with a term that is a further
restriction, you may remove that term. If a license document contains

a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work

occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor
version. For
purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of

this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work

conveyed by you (or copies made from those copies), or (b) primarily
for and in connection with specific products or compilations that
contain the covered work, unless you entered into that arrangement,
or
that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting
any implied license or other defenses to infringement that may
otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot convey a
covered work so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you may
not convey it at all. For example, if you agree to terms that obligate you
to collect a royalty for further conveying from those to whom you convey
the Program, the only way you could satisfy both those terms and this
License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public
License.

Notwithstanding any other provision of this License, you have
permission to link or combine any covered work with a work licensed
under version 3 of the GNU Affero General Public License into a single
combined work, and to convey the resulting work. The terms of this
License will continue to apply to the part which is the covered work,
but the special requirements of the GNU Affero General Public License,
section 13, concerning interaction through a network will apply to the
combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of
the GNU General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the
Program specifies that a certain numbered version of the GNU General
Public License "or any later version" applies to it, you
have the
option of following the terms and conditions either of that numbered
version or of any later version published by the Free Software
Foundation. If the Program does not specify a version number of the

GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY
OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program. If not, see <https://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, your program's commands might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school, if any, to sign a "copyright disclaimer" for the program, if necessary. For more information on this, and how to apply and follow the GNU GPL, see <https://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want
to do, use the GNU Lesser General
Public License instead of this License. But first, please read
<https://www.gnu.org/licenses/why-not-lgpl.html>.
Permission to use, copy, modify, and/or distribute this
software for any purpose with or without fee is hereby granted.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL
WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL
THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR
CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM
LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT,
NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

1.37 aws-sdk-go-v2-config 1.31.6

1.37.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step

```
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
```

```
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
```

```
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
```

```
= addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
```

```
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
```

toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step

AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions

```
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {
```

```
 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
return &awsmiddleware.RegisterServiceMetadata{
 Region:       region,
 ServiceID:    ServiceID,
 OperationName: "ListReceivedLicenses",
}
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
          "DirectoryId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
            "traits": {
              "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
            }
          },
          "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
```

```
            "DomainIpv4List": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 2
                }
              }
            },
            "DomainCredentialsProvider": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "SELF_MANAGED",
                "value": "SELF_MANAGED",
                "documentation": "SELF_MANAGED type of Active Directory"
              },
              {
                "name": "AWS_MANAGED",
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
              }
            ]
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n <note>\n <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n </note>",
```

```
            "smithy.api#http":
{
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
            }
        },
```

```
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS)
license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                   "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
                   "smithy.api#required": {}
                }
            },
            "LicenseServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                 "traits": {
                   "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
```

the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server. ",
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": " The tags that apply for the license server endpoint. "
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": " The Amazon Resource Name (ARN) of the identity provider specified in the request. "
              }
            },
            "LicenseServerEndpointArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": " The ARN of the <code>LicenseServerEndpoint</code> resource. "
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
          "type": "union",
          "members": {
            "SecretsManagerCredentialsProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
              "traits": {
                "smithy.api#documentation": " Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory. "

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/DeleteLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
              "smithy.api#required": {}
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
```

```
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}

      }
       },
        "com.amazonaws.licensemanagerusersubscriptions#Directory": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
```

```
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
```

```
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
      "type": "union",
      "members": {
        "ActiveDirectoryIdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
      "type": "structure",
      "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Settings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
```

```
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
               "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
               "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
               "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
```

```
                "smithy.api#required": {}
            }
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
          },
```

```
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
 },
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
 },
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
},
{
```

```
    "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager User Subscriptions",
                "arnNamespace": "license-manager-user-subscriptions",
                "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
                "name": "license-manager-user-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
                "additionalAllowedHeaders": [
                    "*",
                    "content-type",
                    "x-amz-content-sha256",
                    "x-amz-user-agent",
                    "x-amzn-platform-id",
                    "x-amzn-trace-id",
                    "content-length",

          "x-api-key",
                    "authorization",
                    "x-amz-date",
                    "x-amz-security-token",
                    "Access-Control-Allow-Headers",
                    "Access-Control-Allow-Methods",
                    "Access-Control-Allow-Origin"
                ],
                "additionalExposedHeaders": [
                    "x-amzn-errortype",
                    "x-amzn-requestid",
                    "x-amzn-trace-id"
                ]
            },
            "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager User Subscriptions",
            "smithy.rules#endpointRuleSet": {
                "version": "1.0",
                "parameters": {
                    "Region":
{
                        "builtIn": "AWS::Region",
                        "required": false,
                        "documentation": "The AWS region used to dispatch the request.",
```

```
            "type": "String"
        },
        "UseDualStack": {
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
            "type": "Boolean"
        },
        "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
        },
        "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
        }
    },
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Endpoint"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
```

```
                    ]
                }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
        },
        {
            "conditions": [
                {

                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": {
                    "ref": "Endpoint"
                },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "isSet",
                "argv": [
                    {
                        "ref": "Region"
                    }
                ]
            }
        ],
```

```
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "aws.partition",

                       "argv": [
                            {
                              "ref": "Region"
                            }
                          ],
                          "assign": "PartitionResult"
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseFIPS"
                              },

true
                              ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseDualStack"
                              },
                              true
                            ]
                          }
                        ],
                        "rules": [
                          {
                            "conditions": [
                              {

"fn": "booleanEquals",
                                  "argv": [
                                    true,
                                    {
                                      "fn": "getAttr",
                                      "argv": [
```

```
                                {
                                    "ref": "PartitionResult"
                                },
                                "supportsFIPS"
                            ]
                        }
                    ]
                },

            {
                "fn": "booleanEquals",
                "argv": [
                    true,
                    {
                        "fn": "getAttr",
                        "argv": [
                            {
                                "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                        ]
                    }

        ]
                }
            ],
            "rules": [
                {
                    "conditions": [],
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }

    ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
            "type": "error"
        }
    ],
```

```
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [

{
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "fn": "getAttr",
                                        "argv": [

                {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {

        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
```

```
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

    "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
```

```
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

                            ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect":
```

```
{
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",

      "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                    "endpoint":
{
                        "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
```

```
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
```

```
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",
              "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
      "type": "structure",
      "members": {
        "ProvisioningStatus": {
          "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
          "traits": {
            "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
```

```
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
```

```
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
              }
            },
            "LicenseServerEndpointId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
              }
            },
            "LicenseServerEndpointArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
              }
            },
            "LicenseServerEndpointProvisioningStatus": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
               "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
              }
            },
            "LicenseServers": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
              }
            },
            "CreationTime": {
              "target": "smithy.api#Timestamp",
              "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
          "type": "string"
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
```

```
        "traits": {
          "smithy.api#enum": [
            {
              "name": "HEALTHY",
              "value": "HEALTHY",
              "documentation": ""
            },
            {
              "name": "UNHEALTHY",
              "value": "UNHEALTHY",
              "documentation": ""
            },
            {
              "name": "NOT_APPLICABLE",
              "value": "NOT_APPLICABLE",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>",
              "smithy.api#required": {}
            }
          },
          "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
      "type": "structure",
      "members": {
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
          }
        },
        "Filters": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Product</p>\n        </li>\n        <li>\n          <p>DirectoryId</p>\n
</li>\n      </ul>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
            "smithy.api#required": {}
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
```

```
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
```

```
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
</li>\n        </ul>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
            "InstanceSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
{}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints </p>",
            "smithy.api#http": {
               "code": 200,
```

```
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
             "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
```

```
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
             "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
```

```
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
         },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

      }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
          }
        },
        "NextToken": {
          "target":
 "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {

         "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
```

```
user.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
            "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                    "smithy.api#required": {}
                }
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
```

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
         }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
```

```
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
```

```
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {

         "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
```

```
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
```

```
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/StopProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
```

```
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
```

```
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
 {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
```

```
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "TagKeys": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
              "smithy.api#httpQuery": "tagKeys",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
            "AddSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
                    "smithy.api#required":
{}
                }
            },
            "RemoveSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
                }
            }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
    }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
```

```
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
```

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {
```

```
 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {
```

```
 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
```

```
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
```

```
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
```

```
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}
```

```
type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
```

```
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string
```

```
 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string
```

```
 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
```

```
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
```

```
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are

met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

```
 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
```

SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },

        {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                 "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
          "type": "structure",
          "members": {},
          "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
```

```
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

      "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
           }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/GetServiceSettings"

        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
        },
        "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
        },
        "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
        },
        "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
        },
        "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
```

```
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

   "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your
```

```
instance.</p>"
                }
            },
            "SubscriptionProviderCreateTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
                }
            },
            "SubscriptionProviderUpdateTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
                }
            },
            "DualSubscription": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
                }
            },
            "RegisteredWithSubscriptionProvider": {
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
```

```
        "aws.api#service": {
          "sdkId": "License Manager Linux Subscriptions",
           "arnNamespace": "license-manager-linux-subscriptions",
          "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
```

```
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
        },
        "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
        }
    },
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Endpoint"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }

    ],
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                    "type": "error"
                },
                {
                    "conditions": [],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
```

```
                                {
                                    "ref": "UseDualStack"
                                },
                                true
                            ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
```

```
                "fn": "aws.partition",
                        "argv": [
                          {
                            "ref": "Region"
                          }
                        ],
                        "assign": "PartitionResult"
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {

                          "ref": "UseFIPS"
                              },
                              true
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseDualStack"
                              },
                              true
                            ]
                          }

],
                        "rules": [
                          {
                            "conditions": [
                              {
                                "fn": "booleanEquals",
                                "argv": [
                                  true,
                                  {
                                    "fn": "getAttr",
                                    "argv": [
                                      {
                                        "ref": "PartitionResult"

                },
                                          "supportsFIPS"
```

```
                                        ]
                                    }
                                ]
                            },
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [

                                        {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                            "type": "error"
```

```
                }
            ],
            "type": "tree"
        },
        {

    "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

                "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",
```

```
"properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS is enabled
but this partition does not support FIPS",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true


                ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {

                                                "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
```

```
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "rules": [

        {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"

                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
```

```
                        ],
                        "type": "tree"
                      }
                    ],
                    "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ],
            "type": "tree"
          }
        ]
      },
      "smithy.rules#endpointTests": {
        "testCases": [
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
```

```
                {

              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                    }

            },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {

             "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
           },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }

                 },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }
```

```
    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
```

```
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },

        {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                  },
                  "params": {

          "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                  "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                  },
                  "params": {
```

```
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",

                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
      "type": "structure",
      "members": {
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
          <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
```

```
"NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
          "smithy.api#http": {
            "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptions"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n          <p>The valid names for this filter are:</p>\n          <ul>\n              <li>\n                <p>\n                  <code>Subscription</code>\n                </p>\n              </li>\n          </ul>\n          <p>The valid Operators for this filter are:</p>\n          <ul>\n              <li>\n                <p>\n                  <code>contains</code>\n                </p>\n              </li>\n              <li>\n                <p>\n                  <code>equals</code>\n                </p>\n              </li>\n              <li>\n                <p>\n                  <code>Notequal</code>\n                </p>\n              </li>\n          </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
```

```
        "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
            "Subscriptions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional objects.</p>"

                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
```

```
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

     "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
        "smithy.api#http": {
          "method": "GET",
```

```
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}

            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "EQUAL",
              "value": "Equal",
              "documentation": "Equal operator"
            },
            {
              "name": "NOT_EQUAL",
```

```
                "value": "NotEqual",
                "documentation": "Not equal operator"
            },
            {
                "name": "CONTAINS",
                "value": "Contains",
                "documentation": "Contains operator"
            }
        ],
        "smithy.api#length": {
            "min": 1,
            "max": 20
        }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
            },
            {

"name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
    },
    "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                 "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {

             "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
                }
            },
            "SubscriptionProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
```

Manager currently supports \n\t\t\tRed Hat subscriptions. "
}
},
"SecretArn": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token. "
}
},
"SubscriptionProviderStatus": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
"traits": {
"smithy.api#documentation": " Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token. "
}
},
"SubscriptionProviderStatusMessage": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
}
},
"LastSuccessfulDataRetrievalTime": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
}
}
},
"traits": {
"smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
"type": "list",
"member": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":

```
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
                {
                    "name": "Successful",
                    "value": "Successful",
                    "documentation": "Successful status"
                },
                {
                    "name": "Failed",
                    "value": "Failed",
                    "documentation": "Failed status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
```

```
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with
Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace.
Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing
from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
          "type": "list",

         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "RedHat",
                "value": "RedHat",
                "documentation": "RedHat subscription provider namespace"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
          "type":
 "list",
          "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "ACTIVE",
                "value": "ACTIVE",
```

```
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
```

```
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
 {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work

(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work

or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent

AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID

ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.38 simdjson 3.10.1-r0

1.38.1 Available under license :

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,

and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to

communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and

attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or

implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "{}" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright 2018-2023 The simdjson authors

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

ISC

contributors (in no particular order)

Thomas Navennec
Kai Wolf
Tyler Kennedy
Frank Wessels
George Fotopoulos
Heinz N. Gies
Emil Gedda
Wojciech Mua
Georgios Floros
Dong Xie
Nan Xiao
Egor Bogatov
Jinxi Wang
Luiz Fernando Peres
Wouter Bolsterlee
Anish Karandikar
Reini Urban
Tom Dyson
Ihor Dotsenko
Alexey Milovidov
Chang Liu
Sunny Gleason
John Keiser
Zach Bjornson
Vitaly Baranov
Juho Lauri
Michael Eisel
Io Daza Dillon
Paul Dreik
Jeremie Piotte
Matthew Wilson
Duan Jovanovi
Matja Ostrovernik
Nong Li
Furkan Takale
Brendan Knapp
Danila Kutenin
Pavel Pavlov

Hao Chen
Nicolas Boyer
Kim Walisch and Jatin Bhateja (AVX-512 bitset decoder)
Fangzheng Zhang andWeiqiang Wan (AVX-512 kernel)
if you have contributed to the project and your name does not
appear in this list, please let us know!

1.39 pam 1.6.1-r1

1.39.1 Available under license :

Unless otherwise *explicitly* stated the following text describes the licensed conditions under which the contents of this Linux-PAM release may be distributed:

Redistribution and use in source and binary forms of Linux-PAM, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain any existing copyright
  notice, and this entire permission notice in its entirety,
  including the disclaimer of warranties.

2. Redistributions in binary form must reproduce all prior and current
  copyright notices, this list of conditions, and the following
  disclaimer in the documentation and/or other materials provided
  with the distribution.

3. The name of any author may not be used to endorse or promote
  products derived from this software without their specific prior
  written permission.

ALTERNATIVELY, this product may be distributed
 under the terms of the
GNU General Public License, in which case the provisions of the GNU GPL are required INSTEAD OF the above restrictions. (This clause is necessary due to a potential conflict between the GNU GPL and the restrictions contained in a BSD-style copyright.)

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR(S) BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR

TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Unless otherwise *explicitly* stated the following text describes the licensed conditions under which the contents of this libpamc release may be distributed:

Redistribution and use in source and binary forms of libpamc, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain any existing copyright notice, and this entire permission notice in its entirety, including the disclaimer of warranties.

2. Redistributions in binary form must reproduce all prior and current copyright notices, this list of conditions, and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. The name of any author may not be used to endorse or promote products derived from this software without their specific prior written permission.

ALTERNATIVELY, this product may be distributed under the terms of the
GNU Library General Public License (LGPL), in which case the provisions of the GNU LGPL are required INSTEAD OF the above restrictions. (This clause is necessary due to a potential conflict between the GNU LGPL and the restrictions contained in a BSD-style copyright.)

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR(S) BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.40 glib 2.82.5-r0

1.40.1 Available under license :

This file contains the copying permission notices for various files in the
GNU C Library distribution that have copyright owners other than the Free
Software Foundation. These notices all require that a copy of the notice
be included in the accompanying documentation and be distributed with
binary distributions of the code, so be sure to include this file along
with any binary distributions derived from the GNU C Library.

All code incorporated from 4.4 BSD is distributed under the following
license:

Copyright (C) 1991 Regents of the University of California.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in
 the
  documentation and/or other materials provided with the distribution.
3. [This condition was removed.]
4. Neither the name of the University nor the names of its contributors
  may be used to endorse or promote products derived from this software
  without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
 OF THE POSSIBILITY OF
SUCH DAMAGE.

The DNS resolver code, taken from BIND 4.9.5, is copyrighted by UC
Berkeley, by Digital Equipment Corporation and by Internet Software

Consortium. The DEC portions are under the following license:

Portions Copyright (C) 1993 by Digital Equipment Corporation.

Permission to use, copy, modify, and distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies, and
that the name of Digital Equipment Corporation not be used in
advertising or publicity pertaining to distribution of the document or
software without specific, written prior permission.

THE SOFTWARE IS PROVIDED ``AS IS" AND DIGITAL EQUIPMENT CORP.
DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL
DIGITAL EQUIPMENT CORPORATION BE LIABLE FOR ANY SPECIAL, DIRECT,
INDIRECT, OR CONSEQUENTIAL DAMAGES
 OR ANY DAMAGES WHATSOEVER RESULTING
FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT,
NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION
WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

The ISC portions are under the following license:

Portions Copyright (c) 1996-1999 by Internet Software Consortium.

Permission to use, copy, modify, and distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND INTERNET SOFTWARE CONSORTIUM DISCLAIMS
ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL INTERNET SOFTWARE
CONSORTIUM BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL
DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR
PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS
ACTION, ARISING
 OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS
SOFTWARE.

The Sun RPC support (from rpcsrc-4.0) is covered by the following
license:

Copyright (c) 2010, Oracle America, Inc.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
  copyright notice, this list of conditions and the following
  disclaimer in the documentation and/or other materials
  provided with the distribution.
* Neither the name of the "Oracle America, Inc." nor the names of its
  contributors may be used to endorse or promote products derived
  from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY
EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The following CMU license covers some of the support code for Mach,
derived from Mach 3.0:

Mach Operating System
Copyright (C) 1991,1990,1989 Carnegie Mellon University
All Rights Reserved.

Permission to use, copy, modify and distribute this software and its
documentation is hereby granted, provided that
 both the copyright
notice and this permission notice appear in all copies of the
software, derivative works or modified versions, and any portions
thereof, and that both notices appear in supporting documentation.

CARNEGIE MELLON ALLOWS FREE USE OF THIS SOFTWARE IN ITS ``AS IS''
CONDITION. CARNEGIE MELLON DISCLAIMS ANY LIABILITY OF ANY KIND FOR
ANY DAMAGES WHATSOEVER RESULTING FROM THE USE OF THIS SOFTWARE.

Carnegie Mellon requests users of this software to return to

Software Distribution Coordinator
School of Computer Science
Carnegie Mellon University

Pittsburgh PA 15213-3890

or Software.Distribution@CS.CMU.EDU any improvements or
extensions that they make and grant Carnegie Mellon the rights to
redistribute these changes.

The file if_ppp.h is under the following CMU license:

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the
 above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
3. Neither the name of the University nor the names of its contributors
  may be used to endorse or promote products derived from this software
  without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY CARNEGIE MELLON UNIVERSITY AND
CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE UNIVERSITY OR CONTRIBUTORS BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
 BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER
IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN
IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The files nss/getnameinfo.c and nss/getaddrinfo.c are copyright (C) by
Craig Metz and are distributed under the following license:

/* The Inner Net License, Version 2.00

 The author(s) grant permission for redistribution and use in source and
binary forms, with or without modification, of the software and documentation
provided that the following conditions are met:

0. If you receive a version of the software that is specifically labelled
  as not being for redistribution (check the version message and/or README),
  you are not permitted to redistribute that version of the software in any
  way or form.

1. All terms of the all other applicable copyrights and licenses must be
  followed.
2. Redistributions of source code
 must retain the authors' copyright
  notice(s), this list of conditions, and the following disclaimer.
3. Redistributions in binary form must reproduce the authors' copyright
  notice(s), this list of conditions, and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
4. [The copyright holder has authorized the removal of this clause.]
5. Neither the name(s) of the author(s) nor the names of its contributors
  may be used to endorse or promote products derived from this software
  without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY ITS AUTHORS AND CONTRIBUTORS ``AS IS'' AND ANY
EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE AUTHORS OR CONTRIBUTORS BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT
 OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

 If these license terms cause you a real problem, contact the author. */

The file sunrpc/des_impl.c is copyright Eric Young:

Copyright (C) 1992 Eric Young
Collected from libdes and modified for SECURE RPC by Martin Kuck 1994
This file is distributed under the terms of the GNU Lesser General
Public License, version 2.1 or later - see the file COPYING.LIB for details.
If you did not receive a copy of the license with this program, please
see <https://www.gnu.org/licenses/> to obtain a copy.

The file inet/rcmd.c is under a UCB copyright and the following:

Copyright (C) 1998 WIDE Project.
All rights reserved.

Redistribution and use in source and binary forms, with
 or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright

notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. Neither the name of the project nor the names of its contributors
may be used to endorse or promote products derived from this software
without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE PROJECT AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE PROJECT OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING,
BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

The file posix/runtests.c is copyright Tom Lord:

Copyright 1995 by Tom Lord

All Rights Reserved

Permission to use, copy, modify, and distribute this software and its
documentation for any purpose and without fee is hereby granted,
provided that the above copyright notice appear in all copies and that
both that copyright notice and this permission notice appear in
supporting documentation, and that the name of the copyright holder not be
used in advertising or publicity pertaining to distribution of the
software without specific, written prior permission.

Tom Lord DISCLAIMS ALL WARRANTIES WITH REGARD TO
THIS SOFTWARE,
INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO
EVENT SHALL TOM LORD BE LIABLE FOR ANY SPECIAL, INDIRECT OR
CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF
USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR
OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THIS SOFTWARE.

The posix/rxspencer tests are copyright Henry Spencer:

Copyright 1992, 1993, 1994, 1997 Henry Spencer. All rights reserved.
This software is not subject to any license of the American Telephone
and Telegraph Company or of the Regents of the University of California.

Permission is granted to anyone to use this software for any purpose on
any computer system, and to alter it and redistribute it, subject
to the following restrictions:

1. The author is not responsible for the consequences of use of this
 software, no matter how awful, even if they arise from flaws in it.

2. The origin of this software
 must not be misrepresented, either by
 explicit claim or by omission. Since few users ever read sources,
 credits must appear in the documentation.

3. Altered versions must be plainly marked as such, and must not be
 misrepresented as being the original software. Since few users
 ever read sources, credits must appear in the documentation.

4. This notice may not be removed or altered.

The file posix/PCRE.tests is copyright University of Cambridge:

Copyright (c) 1997-2003 University of Cambridge

Permission is granted to anyone to use this software for any purpose on any
computer system, and to redistribute it freely, subject to the following
restrictions:

1. This software is distributed in the hope that it will be useful,
 but WITHOUT ANY WARRANTY; without even the implied warranty of
 MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

2. The origin of this software must not be misrepresented, either by
 explicit claim or by omission. In practice, this means that
 if you use
 PCRE in software that you distribute to others, commercially or
 otherwise, you must put a sentence like this

  Regular expression support is provided by the PCRE library package,
  which is open source software, written by Philip Hazel, and copyright
  by the University of Cambridge, England.

 somewhere reasonably visible in your documentation and in any relevant
 files or online help data or similar. A reference to the ftp site for
 the source, that is, to

  ftp://ftp.csx.cam.ac.uk/pub/software/programming/pcre/

 should also be given in the documentation. However, this condition is not
 intended to apply to whole chains of software. If package A includes PCRE,

it must acknowledge it, but if package B is software that includes package
A, the condition is not imposed on package B (unless it uses PCRE
independently).

3. Altered versions must be plainly marked as such, and must not be
misrepresented as being the original software.

4.
If PCRE is embedded in any software that is released under the GNU
General Purpose Licence (GPL), or Lesser General Purpose Licence (LGPL),
then the terms of that licence shall supersede any condition above with
which it is incompatible.

Files from Sun fdlibm are copyright Sun Microsystems, Inc.:

Copyright (C) 1993 by Sun Microsystems, Inc. All rights reserved.

Developed at SunPro, a Sun Microsystems, Inc. business.
Permission to use, copy, modify, and distribute this
software is freely granted, provided that this notice
is preserved.

Various long double libm functions are copyright Stephen L. Moshier:

Copyright 2001 by Stephen L. Moshier <moshier@na-net.ornl.gov>

This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be
useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, see
<https://www.gnu.org/licenses/>. */

Copyright (c) 1995 IBM Corporation

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
'Software'), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to

permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED 'AS IS', WITHOUT WARRANTY OF ANY KIND,
EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Various files in sysdeps/ieee754/flt-32, taken from the CORE-MATH project
<https://core-math.gitlabpages.inria.fr/>, are distributed under the
following license:

Copyright (c) 2022-2024 Alexei Sibidanov. Paul Zimmermann.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished
to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
@c The GNU Lesser General Public License.
@center Version 2.1, February 1999

@c This file is intended to be included within another document,
@c hence no sectioning command or @node.

@display
Copyright @copyright{} 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence the
version number 2.1.]
@end display

@subheading Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software---to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software---typically
libraries---of the Free
Software Foundation and other authors who decide to use it. You can use
it too, but we suggest you first think carefully about whether this
license or the ordinary General Public License is the better strategy to
use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use,
not price. Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of it
in new free programs; and that you are informed that you can do these
things.

To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights. These restrictions translate to certain responsibilities for
you if you distribute copies of the library
or if you modify it.

For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the recipients all the rights that we gave
you. You must make sure that they, too, receive or can get the source
code. If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them
with the library after making changes to the library and recompiling
it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the
library, and (2) we offer you this license, which gives you legal

permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that
there is no warranty for the free library. Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation
will not be affected by problems that might be
introduced by others.

Finally, software patents pose a constant threat to the existence of
any free program. We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder. Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License. This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License. We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

When a program is linked with a library, whether statically or using
a shared library, the combination of the two is legally speaking a
combined work, a derivative
of the original library. The ordinary
General Public License therefore permits such linking only if the
entire combination fits its criteria of freedom. The Lesser General
Public License permits more lax criteria for linking other code with
the library.

We call this license the @dfn{Lesser} General Public License because it
does @emph{Less} to protect the user's freedom than the ordinary General
Public License. It also provides other free software developers Less
of an advantage over competing non-free programs. These disadvantages
are the reason we use the ordinary General Public License for many
libraries. However, the Lesser license provides advantages in certain
special circumstances.

For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it becomes
a de-facto standard. To achieve this, non-free programs must be
allowed to use the library. A more frequent case is that a free
library does the
same job as widely used non-free libraries. In this
case, there is little to gain by limiting the free library to free

software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a ``work based on the library'' and a ``work that uses the library''. The former
contains code derived from the library, whereas the latter must be combined with the library in order to run.

@subheading TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

@enumerate 0
@item
This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called ``this License''). Each licensee is addressed as ``you''.

A ``library'' means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The ``Library'', below, refers to any such software library or work which has been distributed under these terms. A ``work based on the Library'' means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it,
either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term ``modification''.)

``Source code'' for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation

and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

@item
You may copy and distribute
verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

@item
You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

@enumerate a
@item
The modified work must itself be a software library.

@item
You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

@item
You must
cause the whole of the work to be licensed at no
charge to all third parties under the terms of this License.

@item
If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that,

in the event an application does not supply such function or
table, the facility still operates, and performs whatever part of
its purpose remains meaningful.

(For example, a function in a library to compute square roots has
a purpose that is entirely well-defined independent of the
application. Therefore, Subsection 2d requires that any
application-supplied function or table used by this function must
be optional: if the application does not supply it, the square
root function must still compute square roots.)
@end enumerate

These requirements apply to the modified work as a whole. If
identifiable sections
 of that work are not derived from the Library,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Library, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote
it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition, mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this
 License.

@item
You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library. To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License. (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.) Do not make any other change in
these notices.

 Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

@item
You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and
2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

@item
A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a ``work that uses the Library''. Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

However, linking a ``work that uses the Library'' with the Library
creates an executable that is a derivative of the Library (because
it
contains portions of the Library), rather than a ``work that uses the
library''. The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

When a ``work that uses the Library'' uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library. The
threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work. (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

Otherwise,

if the work is a derivative of the Library, you may
distribute the object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

@item
As an exception to the Sections above, you may also combine or
link a ``work that uses the Library'' with the Library to produce a
work containing portions of the Library, and distribute that work
under terms of your choice, provided that the terms permit
modification of the work for the customer's own use and reverse
engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the
Library is used in it and that the Library and its use are covered by
this License. You must supply a copy of this License. If the work
during execution displays copyright notices, you must include the
copyright notice for the Library among them, as well as a reference
directing the user to the copy of
this License. Also, you must do one
of these things:

@enumerate a
@item
Accompany the work with the complete corresponding
machine-readable source code for the Library including whatever
changes were used in the work (which must be distributed under
Sections 1 and 2 above); and, if the work is an executable linked
with the Library, with the complete machine-readable ``work that
uses the Library'', as object code and/or source code, so that the
user can modify the Library and then relink to produce a modified
executable containing the modified Library. (It is understood
that the user who changes the contents of definitions files in the
Library will not necessarily be able to recompile the application
to use the modified definitions.)

@item
Use a suitable shared library mechanism for linking with the Library. A
suitable mechanism is one that (1) uses at run time a copy of the
library already present on the user's computer system, rather than
copying library functions into the executable,
and (2) will operate
properly with a modified version of the library, if the user installs
one, as long as the modified version is interface-compatible with the
version that the work was made with.

@item
Accompany the work with a written offer, valid for at

least three years, to give the same user the materials
specified in Subsection 6a, above, for a charge no more
than the cost of performing this distribution.

@item
If distribution of the work is made by offering access to copy
from a designated place, offer equivalent access to copy the above
specified materials from the same place.

@item
Verify that the user has already received a copy of these
materials or that you have already sent this user a copy.
@end enumerate

For an executable, the required form of the ``work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it. However, as a special exception,
the materials to be distributed need not include anything that
is
normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies the
executable.

It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system. Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

@item
You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

@enumerate a
@item
Accompany the combined library with a copy of the same work
based on the Library,
uncombined with any other library
facilities. This must be distributed under the terms of the
Sections above.

@item
Give prominent notice with the combined library of the fact

that part of it is a work based on the Library, and explaining
where to find the accompanying uncombined form of the same work.
@end enumerate

@item
You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License. Any
attempt otherwise to copy, modify, sublicense, link with, or
distribute the Library is void, and will automatically terminate your
rights under this License. However, parties who have received copies,
or rights, from you under this License will not have their licenses
terminated so long as such parties remain in full compliance.

@item
You are not required to accept this License, since you have not
signed it. However, nothing else grants you permission to modify or
distribute the Library or its derivative works. These actions are
prohibited
 by law if you do not accept this License. Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

@item
Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions. You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.

@item
If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License,
 they do not
excuse you from the conditions of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all. For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software
 distribution system which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

@item
If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

@item
The Free Software Foundation
 may publish revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
``any later version'', you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

@item
If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free

Software Foundation; we sometimes make exceptions for
this. Our
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

@center @b{NO WARRANTY}

@item
BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY ``AS IS'' WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

@item
IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE,
BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.
@end enumerate

@subheading END OF TERMS AND CONDITIONS

@page
@subheading How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change. You can do so by permitting
redistribution under these terms (or, alternatively, under the terms of the
ordinary General Public License).

To apply these terms, attach the following notices to the library. It is
safest to attach them to the start of each source
file to most effectively
convey the exclusion of warranty; and each file should have at least the

``copyright'' line and a pointer to where the full notice is found.

@smallexample
@var{one line to give the library's name and an idea of what it does.}
Copyright (C) @var{year} @var{name of author}

This library is free software; you can redistribute it and/or modify it
under the terms of the GNU Lesser General Public License as published by
the Free Software Foundation; either version 2.1 of the License, or (at
your option) any later version.

This library is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301,
USA.
@end
 smallexample

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a ``copyright disclaimer'' for the library, if
necessary. Here is a sample; alter the names:

@smallexample
Yoyodyne, Inc., hereby disclaims all copyright interest in the library
`Frob' (a library for tweaking knobs) written by James Random Hacker.

@var{signature of Ty Coon}, 1 April 1990
Ty Coon, President of Vice
@end smallexample

That's all there is to it!
Copyright 1992, 1993, 1994, 1997 Henry Spencer. All rights reserved.
This software is not subject to any license of the American Telephone
and Telegraph Company or of the Regents of the University of California.

Permission is granted to anyone to use this software for any purpose on
any computer system, and to alter it and redistribute it, subject
to the following restrictions:

1. The author is not responsible for the consequences of use of this
  software, no matter how awful, even if they arise from flaws in it.

2. The origin of this software must not be misrepresented, either by
explicit claim or by omission. Since few users ever read sources,
credits must appear in the documentation.

3. Altered versions must be plainly marked as such, and must not be
misrepresented as being the original software. Since few users
ever read sources, credits must appear in the documentation.

4. This notice may not be removed or altered.

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who
decide to use it. You
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use,
not price. Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights. These restrictions translate to certain responsibilities for

you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library,
whether gratis
or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software
patents pose a constant threat to the existence of
any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits
such linking only if the
entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General

Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work

which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into
another language. (Hereinafter, translation is
included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium,
provided that
you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the

terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be
reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary
GNU General Public
License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding
machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library". Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that
uses the
library". The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library. The
threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work. (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the
object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany
the work with the complete corresponding
machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate
properly with a modified version of the library, if
the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally
distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any
other library
facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

13. The Free Software Foundation may publish
revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this. Our
decision
will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE,
BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey
the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.

Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their

rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the

notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices
stating that you changed the files and the date of any change.

b) You must cause
any work that you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

c) If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work
are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is

void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed

through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS

TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR
THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU
General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

  Gnomovision version 69, Copyright (C) year name of author
  Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
  This is free software, and you are welcome to redistribute
it
  under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this
 is what you want to do, use the GNU Lesser General
Public License instead of this License.
The Linux Kernel is provided under:

 SPDX-License-Identifier: GPL-2.0 WITH Linux-syscall-note

Being under the terms of the GNU General Public License version 2 only,
according with:

 LICENSES/preferred/GPL-2.0

With an explicit syscall exception, as stated at:

 LICENSES/exceptions/Linux-syscall-note

In addition, other licenses may also apply. Please see:

 Documentation/process/license-rules.rst

for more details.

All contributions to the Linux Kernel are subject to this COPYING file.
SPDX-Exception-Identifier: Linux-syscall-note
SPDX-URL: https://spdx.org/licenses/Linux-syscall-note.html
SPDX-Licenses: GPL-2.0, GPL-2.0+, GPL-1.0+, LGPL-2.0, LGPL-2.0+, LGPL-2.1, LGPL-2.1+, GPL-2.0-only, GPL-2.0-or-later
Usage-Guide:
 This exception is used together with one of the above SPDX-Licenses
 to mark user space API (uapi) header files so they can be included
 into non GPL compliant user space application code.
 To use this exception add it with the keyword WITH to one of the
 identifiers in the SPDX-Licenses tag:
   SPDX-License-Identifier: <SPDX-License> WITH Linux-syscall-note
License-Text:

  NOTE! This copyright does *not* cover user programs that use kernel
services by normal system calls - this is merely considered normal use
of the kernel, and does *not* fall under the heading of "derived work".
Also note that the GPL below is copyrighted by the Free Software
Foundation, but the instance of code that it refers to (the Linux
kernel) is copyrighted by me and
 others who actually wrote it.

Also note that the only valid version of the GPL as far as the kernel
is concerned is _this_ particular version of the license (ie v2, not
v2.2 or v3.x or whatever), unless explicitly otherwise stated.

   Linus Torvalds
UNICODE LICENSE V3

COPYRIGHT AND PERMISSION NOTICE

Copyright 1991-2024 Unicode, Inc.

NOTICE TO USER: Carefully read the following legal agreement. BY
DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING DATA FILES, AND/OR
SOFTWARE, YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE
TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT
DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.

Permission is hereby granted, free of charge, to any person obtaining a
copy of data files and any associated documentation (the "Data Files") or
software and any associated documentation (the "Software") to deal in the
Data Files or Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, and/or sell
copies of the Data Files or Software, and to permit persons to whom the
Data Files or Software are furnished to do so, provided that either (a)
this copyright and permission notice appear with all

copies of the Data
Files or Software, or (b) this copyright and permission notice appear in
associated Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall
not be used in advertising or otherwise to promote the sale, use or other
dealings in these Data Files or Software without prior written
authorization of the copyright holder.

1.41 aws-sdk-go-v2-internal-v4a 1.4.6

1.41.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

```
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
  name: License Scan
  runs-on: ubuntu-latest
  strategy:
   matrix:
    python-version: [3.9]

  steps:
   - name: Checkout target
    uses: actions/checkout@v2
    with:
     path: sdkbase
     ref: ${{ github.base_ref }}
   - name: Checkout this ref
```

```
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
       uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
```

```
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
```

```
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string
```

```
// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
```

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

```
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
  - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
```

```
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
```

```
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
            "DirectoryId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
                "traits": {
                    "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
                }
            },
            "ActiveDirectorySettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
                }
            },
            "ActiveDirectoryType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
```

```
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
```

```
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n <note>\n <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a
```

```
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
```

```
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
```

```
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
```

```
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
             "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
```

```
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
      "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
            "smithy.api#length": {
              "min": 1
            },

  "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Attribute": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
          }
        },
        "Operation": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
          }
        },
        "Value": {
          "target": "smithy.api#String",
          "traits":
{
            "smithy.api#documentation": "<p>Value of the filter.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
```

```
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details \n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
```

```
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
```

```
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
 },
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
 },
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
},
{
   "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
},
{
```

```
    "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
            }
          ],
          "traits": {
            "aws.api#service": {
              "sdkId": "License Manager User Subscriptions",
              "arnNamespace": "license-manager-user-subscriptions",
              "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
              "name": "license-manager-user-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
              "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id",
                "content-length",

           "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
              ],
              "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
              ]
            },
            "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager User Subscriptions",
            "smithy.rules#endpointRuleSet": {
              "version": "1.0",
              "parameters": {
                "Region":
{
                  "builtIn": "AWS::Region",
                  "required": false,
                  "documentation": "The AWS region used to dispatch the request.",
```

```
            "type": "String"
        },
        "UseDualStack": {
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
            "type": "Boolean"
        },
        "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
        },
        "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
        }
    },
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Endpoint"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
```

```
                ]
              }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [
              {

                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "endpoint": {
              "url": {
                "ref": "Endpoint"
              },

"properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Region"
                }
              ]
            }
          ],
```

```
"rules": [
  {
    "conditions": [
      {
        "fn": "aws.partition",

        "argv": [
          {
            "ref": "Region"
          }
        ],
        "assign": "PartitionResult"
      }
    ],
    "rules": [
      {
        "conditions": [
          {
            "fn": "booleanEquals",
            "argv": [
              {
                "ref": "UseFIPS"
              },

true
            ]
          },
          {
            "fn": "booleanEquals",
            "argv": [
              {
                "ref": "UseDualStack"
              },
              true
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {

"fn": "booleanEquals",
                "argv": [
                  true,
                  {
                    "fn": "getAttr",
                    "argv": [
```

```
                                {
                                    "ref": "PartitionResult"
                                },
                                "supportsFIPS"
                            ]
                        }
                    ]
                },

            {
                "fn": "booleanEquals",
                "argv": [
                    true,
                    {
                        "fn": "getAttr",
                        "argv": [
                            {
                                "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                        ]
                    }

        ]
                }
            ],
            "rules": [
                {
                    "conditions": [],
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }

    ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
            "type": "error"
        }
    ],
```

```
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [

{
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "fn": "getAttr",
                                        "argv": [

                {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {

        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
```

```
                    },
                    {
                      "conditions": [],
                      "error": "FIPS is enabled but this partition does not support FIPS",
                      "type": "error"

}
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseDualStack"
                        },
                        true
                      ]
                    }
                  ],
                  "rules": [
                    {

    "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [
                                {
                                  "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                              ]

    }
                            ]
                          }
                        ],
                        "rules": [
                          {
                            "conditions": [],
                            "endpoint": {
                              "url": "https://license-manager-user-
```

```
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

                            ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect":
```

```
{
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",

        "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                    "endpoint":
{
                        "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
```

```
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
```

```
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
```

```
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",
              "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
      "type": "structure",
      "members": {
        "ProvisioningStatus": {
          "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
          "traits": {
            "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
```

```
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
```

```
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
    "type": "string"
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
```

```
        "traits": {
          "smithy.api#enum": [
            {
              "name": "HEALTHY",
              "value": "HEALTHY",
              "documentation": ""
            },
            {
              "name": "UNHEALTHY",
              "value": "UNHEALTHY",
              "documentation": ""
            },
            {
              "name": "NOT_APPLICABLE",
              "value": "NOT_APPLICABLE",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>",
              "smithy.api#required": {}
            }
          },
          "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                    "smithy.api#required": {}
                }
            },
             "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
```

```
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
```

```
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
</li>\n        </ul>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
            "InstanceSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
{}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints </p>",
            "smithy.api#http": {
               "code": 200,
```

```
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
             "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
```

```
        "LicenseServerEndpoints": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
        "smithy.api#http": {
          "method": "GET",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#readonly": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
```

```
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"

      }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
          }
        },
        "NextToken": {
          "target":
 "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {

         "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
```

```
user.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
            "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
             "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
             "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
             },
             "smithy.api#idempotent": {}
          }
       },
       "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                   "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                   "smithy.api#required": {}
                }
             },

         "Product": {
                "target": "smithy.api#String",
                "traits": {
                   "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                   "smithy.api#required": {}
                }
             },
             "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                   "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
```

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
         }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
```

```
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
```

```
                },
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                "smithy.api#required": {}
              }
            }
          },

          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

             "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
```

```
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
```

```
            {

        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
```

```
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "ProductUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
                }
             }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
```

```
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
```

```
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
 {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
```

```
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "TagKeys": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
              "smithy.api#httpQuery": "tagKeys",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
    }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
```

```
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
```

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {
```

```
 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {
```

```
 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
```

```
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
```

```
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
```

```
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}
```

```
type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
```

```
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string
```

```
 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string
```

```
 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
```

```
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
```

```
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are

met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
```

SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },

        {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                 "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
          "type": "structure",
          "members": {},
          "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
```

```
            },
            "SubscriptionProviderSource": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

          "traits": {
                  "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
               }
            },
            "SecretArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
               }
            },
            "SubscriptionProviderStatus": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
               "traits": {
                  "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
               }
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
         "type": "operation",
         "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
         },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/GetServiceSettings"

        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
        },
        "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
        },
        "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
        },
        "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
        },
        "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
```

```
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

   "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your
```

```
instance.</p>"
                }
            },
            "SubscriptionProviderCreateTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
                }
            },
            "SubscriptionProviderUpdateTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
                }
            },
            "DualSubscription": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
                }
            },
            "RegisteredWithSubscriptionProvider": {
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
```

```
        "aws.api#service": {
          "sdkId": "License Manager Linux Subscriptions",
           "arnNamespace": "license-manager-linux-subscriptions",
          "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
```

```
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
        },
        "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
        }
    },
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Endpoint"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }

    ],
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                    "type": "error"
                },
                {
                    "conditions": [],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
```

```
                                {
                                    "ref": "UseDualStack"
                                },
                                true
                            ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
```

```
                "fn": "aws.partition",
                        "argv": [
                          {
                            "ref": "Region"
                          }
                        ],
                        "assign": "PartitionResult"
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {

                          "ref": "UseFIPS"
                              },
                              true
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseDualStack"
                              },
                              true
                            ]
                          }

],
                        "rules": [
                          {
                            "conditions": [
                              {
                                "fn": "booleanEquals",
                                "argv": [
                                  true,
                                  {
                                    "fn": "getAttr",
                                    "argv": [
                                      {
                                        "ref": "PartitionResult"

                },
                                          "supportsFIPS"
```

```
                                ]
                            }
                        ]
                    },
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            true,
                            {
                                "fn": "getAttr",
                                "argv": [

                                {
                                        "ref": "PartitionResult"
                                    },
                                    "supportsDualStack"
                                ]
                            }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],

    "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                        "type": "error"
```

```
                }
            ],
            "type": "tree"
        },
        {

    "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

                "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",
```

```
"properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS is enabled
but this partition does not support FIPS",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true


                ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {

                                                    "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
```

```
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "rules": [

        {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"

                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
```

```
                        ],
                        "type": "tree"
                      }
                    ],
                    "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ],
            "type": "tree"
          }
        ]
      },
      "smithy.rules#endpointTests": {
        "testCases": [
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
```

```
                {

            "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                  }

        },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                  }
                },
                "params": {
                  "Region": "cn-north-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {

          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
       },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }

                 },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }
```

```
    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
```

```
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },

        {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                  },
                  "params": {

          "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                  "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                  },
                  "params": {
```

```
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",

                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
      "type": "structure",
      "members": {
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
          <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
```

```
"NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
          "smithy.api#http": {
            "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptions"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n          <p>The valid names for this filter are:</p>\n          <ul>\n              <li>\n                <p>\n                  <code>Subscription</code>\n                </p>\n              </li>\n          </ul>\n          <p>The valid Operators for this filter are:</p>\n          <ul>\n              <li>\n                <p>\n                  <code>contains</code>\n                </p>\n              </li>\n              <li>\n                <p>\n                  <code>equals</code>\n                </p>\n              </li>\n              <li>\n                <p>\n                  <code>Notequal</code>\n                </p>\n              </li>\n          </ul>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 16384
                }
              }
            }
          },
```

```
        "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
            "Subscriptions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional objects.</p>"

                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
```

```
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "RegisteredSubscriptionProviders"
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
         "type": "structure",
         "members": {
            "SubscriptionProviderSources": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
                  "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                  "smithy.api#range": {
                     "min": 1,
                     "max": 100
                  }
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
               }
            }
         },

         "traits": {
            "smithy.api#input": {}
         }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
        "smithy.api#http": {
          "method": "GET",
```

```
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}

            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "EQUAL",
              "value": "Equal",
              "documentation": "Equal operator"
            },
            {
              "name": "NOT_EQUAL",
```

```
                "value": "NotEqual",
                "documentation": "Not equal operator"
            },
            {
                "name": "CONTAINS",
                "value": "Contains",
                "documentation": "Contains operator"
            }
        ],
        "smithy.api#length": {
            "min": 1,
            "max": 20
        }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
            },
            {

"name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
    },
    "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                 "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
                }
            },
            "SubscriptionProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
```

Manager currently supports \n\t\t\tRed Hat subscriptions. "
}
},
"SecretArn": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token. "
}
},
"SubscriptionProviderStatus": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
"traits": {
"smithy.api#documentation": " Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token. "
}
},
"SubscriptionProviderStatusMessage": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
}
},
"LastSuccessfulDataRetrievalTime": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
}
}
},
"traits": {
"smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
"type": "list",
"member": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":

```
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
                {
                    "name": "Successful",
                    "value": "Successful",
                    "documentation": "Successful status"
                },
                {
                    "name": "Failed",
                    "value": "Failed",
                    "documentation": "Failed status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
```

```
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with
Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace.
Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing
from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
          "type": "list",

         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "RedHat",
                "value": "RedHat",
                "documentation": "RedHat subscription provider namespace"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
          "type":
 "list",
          "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "ACTIVE",
                "value": "ACTIVE",
```

```
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
```

```
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
 {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work

(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work

or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent

AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID

ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.42 aws-sdk-go-v2-service-s3 1.87.3

1.42.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd

Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
name: License Scan

on: [pull_request]

jobs:

```
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
     # compare
     - name: License test
       run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
```

```
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag
```

```
 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
```

```
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
```

```
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
```

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength

```
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
```

```
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense
```

```
 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
```

```
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
```

```
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
```

```
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
```

```
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
```

```
        "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

        {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
      "type": "structure",
      "members": {
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
            "smithy.api#required": {}
          }
        },
        "LicenseServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
      "type": "structure",
      "members": {
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
          }
        },
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/DeregisterIdentityProvider"
```

```
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
```

```
        "traits": {
            "smithy.api#output": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
```

```
            "uri": "/user/DisassociateUser"
          },
          "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummary":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
      "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
            "smithy.api#length": {
              "min": 1
            },

  "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Attribute": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
          }
        },
        "Operation": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
        },
        "Value": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#FilterList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
    "type": "union",
    "members": {
        "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
                "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
    "type": "structure",
    "members": {
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
          "type": "list",
```

```
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },

    "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                 }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "AssociationDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
              }
            },
            "DisassociationDate": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
```

```
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

       "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
```

```
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
              "UseFIPS": {
                "builtIn": "AWS::UseFIPS",
                "required": true,
                "default": false,
                "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                "type": "Boolean"
              },
              "Endpoint": {
                "builtIn": "SDK::Endpoint",
                "required": false,
                "documentation": "Override the endpoint used to send this request",
                "type": "String"
              }
            },
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "isSet",
```

```
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [
              {

                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "endpoint": {
              "url": {
                "ref": "Endpoint"
              },

    "properties": {},
                "headers": {}
```

```
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },

true

                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
```

```
                "ref": "UseDualStack"
              },
              true
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {

"fn": "booleanEquals",
                "argv": [
                  true,
                  {
                    "fn": "getAttr",
                    "argv": [
                      {
                        "ref": "PartitionResult"
                      },
                      "supportsFIPS"
                    ]
                  }
                ]
              },

            {
                "fn": "booleanEquals",
                "argv": [
                  true,
                  {
                    "fn": "getAttr",
                    "argv": [
                      {
                        "ref": "PartitionResult"
                      },
                      "supportsDualStack"
                    ]
                  }

        ]
              }
            ],
            "rules": [
              {
                "conditions": [],
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-
```

```
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

    ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [

 {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "fn": "getAttr",
                                                "argv": [

                                {
                                                        "ref": "PartitionResult"
                                                    },
                                                    "supportsFIPS"
                                                ]
                                            },
```

```
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {

        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

    "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
```

```
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]

            }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }

                    ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
```

```
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ]
    },
    "smithy.rules#endpointTests": {
        "testCases": [
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",

        "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                    }
                },
```

```
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
```

```
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
         "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                "UseDualStack":
false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
              "expect": {
                "endpoint": {
                  "url": "https://example.com"
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",
              "expect": {
                "error": "Invalid Configuration: Missing Region"
```

```
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
        "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
        },
```

```
            "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of license server.</p>"
               }
            },
            "ServerEndpoint": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
               }
            },
            "LicenseServerEndpointId": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
               }
            },
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
               }
            },
            "LicenseServerEndpointProvisioningStatus": {
               "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
               }
            },
            "LicenseServers": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
               }
```

```
            },
            "CreationTime": {
               "target": "smithy.api#Timestamp",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
         "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "PROVISIONING",
                  "value": "PROVISIONING",
                  "documentation": ""
               },
               {
                  "name": "PROVISIONING_FAILED",

                 "value": "PROVISIONING_FAILED",
                  "documentation": ""
               },
               {
                  "name": "PROVISIONED",
                  "value": "PROVISIONED",
                  "documentation": ""
               },
               {
                  "name": "DELETING",
                  "value": "DELETING",
                  "documentation": ""
               },
```

```
            {
              "name": "DELETION_FAILED",
              "value": "DELETION_FAILED",
              "documentation": ""
            },
            {
              "name": "DELETED",
              "value": "DELETED",
              "documentation": ""
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "HEALTHY",
              "value": "HEALTHY",
              "documentation": ""
            },
            {
              "name": "UNHEALTHY",
              "value": "UNHEALTHY",
              "documentation": ""
            },
            {
              "name": "NOT_APPLICABLE",
              "value": "NOT_APPLICABLE",
              "documentation": ""
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
    ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
```

```
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
```

```
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoints": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/ListProductSubscriptions"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "IdentityProvider": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
```

empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects. "
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": " Returns the list of tags for the specified resource. ",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": " The Amazon Resource Name (ARN) of the resource whose tags you want to retrieve. ",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n        <p>Status</p>\n        </li>\n        <li>\n        <p>Username</p>\n
</li>\n        <li>\n        <p>Domain</p>\n        </li>\n        </ul>"

          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
          }
        },
        "NextToken": {
          "target":
 "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {

          "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                "smithy.api#required": {}
              }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
```

```
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
              }
            },
```

```
        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n          </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
```

```
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
          "type": "structure",
          "members": {
            "SecretId": {
              "target": "smithy.api#String",

          "traits": {
                  "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains credentials.</p>",
                  "smithy.api#length": {
                    "min": 1
                  }
                }
              }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
              "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
          "type": "structure",
```

```
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
   <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/StartProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
```

```
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StringList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
           },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
          },
```

```
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
      "type": "structure",
```

```
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
```

```
update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
```

```
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
```

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {
```

```
// License details.
Licenses []types.License

// Token for the next set of results.
NextToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestEnd(stack); err != nil {
 return err
```

```
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
```

```
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {
```

```
 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
```

```
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string
```

```
 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
```

```
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
```

```
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
```

```
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string
```

```
// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
```

```
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
```

```
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
```

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
"context"
"fmt"
awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
"github.com/aws/smithy-go/middleware"

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
```

```
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
```

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
            }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
```

```
"list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
```

```
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
              }
            },
            "Status": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
              }
            },
            "StatusMessage": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
              "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
              }
            },
            "HomeRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
          "type": "structure",
          "members": {
            "AmiId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
              }
            },
            "InstanceID": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
        },
        "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
```

```
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
          "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
          },
          "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

     "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
```

```
            "required": false,
            "documentation": "The AWS region used to dispatch the request.",
            "type": "String"
          },
          "UseDualStack": {
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
             "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

```
                        true
                    ]
                }

        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
```

```
  {
    "conditions": [
      {
        "fn": "isSet",
        "argv": [
          {
            "ref": "Region"
          }
        ]
      }
    ],
    "rules": [
      {
        "conditions": [
          {

"fn": "aws.partition",
            "argv": [
              {
                "ref": "Region"
              }
            ],
            "assign": "PartitionResult"
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {

                "ref": "UseFIPS"
                  },
                  true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
```

```
],
                                    "rules": [
                                      {
                                        "conditions": [
                                          {
                                            "fn": "booleanEquals",
                                            "argv": [
                                              true,
                                              {
                                                "fn": "getAttr",
                                                "argv": [
                                                  {
                                                    "ref": "PartitionResult"

                                },
                                                    "supportsFIPS"
                                                  ]
                                                }
                                              ]
                                            },
                                            {
                                              "fn": "booleanEquals",
                                              "argv": [
                                                true,
                                                {
                                                  "fn": "getAttr",
                                                  "argv": [

                                                   {
                                                      "ref": "PartitionResult"
                                                    },
                                                    "supportsDualStack"
                                                  ]
                                                }
                                              ]
                                            }
                                          ],
                                          "rules": [
                                            {
                                              "conditions": [],

        "rules": [
                                                {
                                                  "conditions": [],
                                                  "endpoint": {
                                                    "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                    "properties": {},
```

```
                "headers": {}
              },
              "type": "endpoint"
            }
          ],

      "type": "tree"
          }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
        "type": "error"
      }
    ],
    "type": "tree"
  },
  {

"conditions": [
      {
        "fn": "booleanEquals",
        "argv": [
          {
            "ref": "UseFIPS"
          },
          true
        ]
      }
    ],
    "rules": [
      {
        "conditions": [
          {

"fn": "booleanEquals",
            "argv": [
              {
                "fn": "getAttr",
                "argv": [
                  {
                    "ref": "PartitionResult"
                  },
                  "supportsFIPS"
                ]
```

```
                    },
                    true

                ]
            }
        ],
        "rules": [
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "FIPS is enabled
but this partition does not support FIPS",
        "type": "error"
    }
  ],
  "type": "tree"
},
{
  "conditions": [
    {
      "fn": "booleanEquals",
      "argv": [
        {
          "ref": "UseDualStack"
        },
        true

    ]
    }
```

```
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {

                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "rules": [

        {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"

                    }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
```

```
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ],
        "type": "tree"
    }
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {

      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

    },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
             },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": false
```

```
        }
      },
      {

  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

       },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
          }
        },
        "params": {
          "Region": "us-isob-east-1",
          "UseFIPS": true,
          "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },

    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
```

```
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
  "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
          },
          {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
          }
```

```
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
            "SourceRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "OrganizationIntegration": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
                "traits": {
                    "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
 <li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
 one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
 <p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
            <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
         "type": "structure",
         "members": {
            "Instances": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
               "traits": {
                  "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n         <p>The valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n                  <code>contains</code>\n               </p>\n            </li>\n            <li>\n               <p>\n                  <code>equals</code>\n               </p>\n            </li>\n            <li>\n               <p>\n                  <code>Notequal</code>\n               </p>\n            </li>\n         </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
```

```
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 16384
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
```

```
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
              "traits": {
                "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
                }
            }
        },
```

```
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {

"name": "Disabled",
          "value": "Disabled",
          "documentation": "Disabled OrganizationIntegration"
        }
      ]
    }
  },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/RegisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
```

```
            {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
            },
            {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String",
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            }
        }
     },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
```

```
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n       Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n       Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
"list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

  "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tagKeys": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input":
 {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {

 "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/UpdateServiceSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
            "smithy.api#required":
{}
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home Region.</p>"
              }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
```

```
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
               "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
         }
      }
   }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of,

publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and

wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the

Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter

SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step

spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit

1.43 xz-libs 5.6.3-r1

1.43.1 Available under license :

XZ Utils Licensing
==========

Different licenses apply to different files in this package. Here
is a summary of which licenses apply to which parts of this package:

- liblzma is under the BSD Zero Clause License (0BSD).

- The command line tools xz, xzdec, lzmadec, and lzmainfo are
under 0BSD except that, on systems that don't have a usable
getopt_long, GNU getopt_long is compiled and linked in from the
'lib' directory. The getopt_long code is under GNU LGPLv2.1+.

- The scripts to grep, diff, and view compressed files have been
adapted from GNU gzip. These scripts (xzgrep, xzdiff, xzless,
and xzmore) are under GNU GPLv2+. The man pages of the scripts
are under 0BSD; they aren't based on the man pages of GNU gzip.

- Most of the XZ Utils specific documentation that is in
plain text files (like README, INSTALL, PACKAGERS, NEWS,
and ChangeLog) are under 0BSD unless stated otherwise in
the file itself. The files xz-file-format.txt and
lzma-file-format.xt are in the public domain but may
be distributed under the terms of 0BSD too.

- Translated messages and man pages are under 0BSD except that
some old translations are in the public domain.

- Test files and test code in the 'tests' directory, and
debugging utilities in the 'debug' directory are under
the BSD Zero Clause License (0BSD).

- The GNU Autotools based build system contains files that are
under GNU GPLv2+, GNU GPLv3+, and a few permissive licenses.
These files don't affect the licensing of the binaries being
built.

- The 'extra' directory contains files that are under various
free software licenses. These aren't built or installed as
part of XZ Utils.

For the files under the BSD Zero Clause License (0BSD), if
a copyright notice is needed, the following is sufficient:

Copyright
(C) The XZ Utils authors and contributors

If you copy significant amounts of 0BSD-licensed code from XZ Utils
into your project, acknowledging this somewhere in your software is
polite (especially if it is proprietary, non-free software), but
it is not legally required by the license terms. Here is an example
of a good notice to put into "about box" or into documentation:

This software includes code from XZ Utils <https://tukaani.org/xz/>.

The following license texts are included in the following files:
- COPYING.0BSD: BSD Zero Clause License
- COPYING.LGPLv2.1: GNU Lesser General Public License version 2.1
- COPYING.GPLv2: GNU General Public License version 2
- COPYING.GPLv3: GNU General Public License version 3

A note about old XZ Utils releases:

XZ Utils releases 5.4.6 and older and 5.5.1alpha have a
significant amount of code put into the public domain and
that obviously remains so. The switch
from public domain to
0BSD for newer releases was made in Febrary 2024 because
public domain has (real or perceived) legal ambiguities in
some jurisdictions.

There is very little *practical* difference between public
domain and 0BSD. The main difference likely is that one
shouldn't claim that 0BSD-licensed code is in the public
domain; 0BSD-licensed code is copyrighted but available under
an extremely permissive license. Neither 0BSD nor public domain
require retaining or reproducing author, copyright holder, or
license notices when distributing the software. (Compare to,
for example, BSD 2-Clause "Simplified" License which does have
such requirements.)

If you have questions, don't hesitate to ask for more information.
The contact information is in the README file.
GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies

of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.
Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the

program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause

any work that you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

c) If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work
are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete

machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the

Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU
General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if

necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this
is what you want to do, use the GNU Lesser General
Public License instead of this License.

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for
software and other kinds of works.

The licenses for most software and other practical works are designed
to take away your freedom to share and change the works. By contrast,
the GNU General Public License is intended to guarantee your freedom to
share and change all versions of a program--to make sure it remains free
software for all its users. We, the Free Software Foundation, use the
GNU General Public License for most of our software; it applies also to
any other work released this way by its authors. You can apply it to
your programs, too.

When we speak of free software, we are referring to
freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
them if you wish), that you receive source code or can get it if you
want it, that you can change the software or use pieces of it in new
free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you
these rights or asking you to surrender the rights. Therefore, you have
certain responsibilities if you distribute copies of the software, or if
you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1)
assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand
ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of

packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works

for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a

copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent

the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option
remove any additional permissions from that copy, or from any part of
it. (Additional permissions may be written to require their own
removal in certain cases when you modify the work.) You may place
additional permissions on material, added by you to a covered work,
for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you
add to a covered work, you may (if authorized by the copyright holders of
that material) supplement the terms of this License with terms:

a) Disclaiming warranty
or limiting liability differently from the
terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or
author attributions in that material or in the Appropriate Legal
Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or
requiring that modified versions of such material be marked in
reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or
authors of the material; or

e) Declining to grant rights under trademark law for use of some
trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that
material by anyone who conveys the material (or modified versions of
it) with contractual assumptions of liability to the recipient, for
any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further
restrictions" within the meaning of section 10. If the Program as you
received it, or any part of it, contains a notice stating that it is
governed by this License along with a term that is a further
restriction, you may remove that term. If a license document contains
a further restriction but permits relicensing or conveying under this
License, you may add to a covered work material governed by the terms
of that license document, provided that the further restriction does
not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you

must place, in the relevant source files, a statement of the
additional terms that apply to those files, or a notice indicating
where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the
form of a separately written license, or stated as exceptions;
the above
requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly
provided under this License. Any attempt otherwise to propagate or
modify it is void, and will automatically terminate your rights under
this License (including any patent licenses granted under the third
paragraph of section 11).

However, if you cease all violation of this License, then your
license from a particular copyright holder is reinstated (a)
provisionally, unless and until the copyright holder explicitly and
finally terminates your license, and (b) permanently, if the copyright
holder fails to notify you of the violation by some reasonable means
prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is
reinstated permanently if the copyright holder notifies you of the
violation by some reasonable means, this is the first time you have
received notice of violation of this License (for any work) from that
copyright
holder, and you cure the violation prior to 30 days after
your receipt of the notice.

Termination of your rights under this section does not terminate the
licenses of parties who have received copies or rights from you under
this License. If your rights have been terminated and not permanently
reinstated, you do not qualify to receive new licenses for the same
material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or
run a copy of the Program. Ancillary propagation of a covered work
occurring solely as a consequence of using peer-to-peer transmission
to receive a copy likewise does not require acceptance. However,
nothing other than this License grants you permission to propagate or
modify any covered work. These actions infringe copyright if you do
not accept this License. Therefore, by modifying or propagating a
covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For
purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you

to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY
OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
state the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where
the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <https://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<https://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want
to do, use the GNU Lesser General
Public License instead of this License. But first, please read

<https://www.gnu.org/licenses/why-not-lgpl.html>.
Permission to use, copy, modify, and/or distribute this
software for any purpose with or without fee is hereby granted.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL
WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL
THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR
CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM
LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT,
NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

1.44 go-jose 3.0.4

1.44.1 Available under license :

Copyright (c) 2012 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004

http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including

the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or

Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the

origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier

identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

1.45 vimeo-go-magic 1.0.0

1.45.1 Available under license :

Copyright (c) 2014, Vimeo, LLC.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS
OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The views and conclusions contained in the software and documentation are those
of the authors and should not be interpreted as representing official policies,
either expressed or implied, of Vimeo, LLC.

1.46 libxml2 2.13.4-r6

1.46.1 Available under license :

Except where otherwise noted in the source code (e.g. the files dict.c and list.c, which are covered by a similar licence but with different Copyright notices) all the files are:

Copyright (C) 1998-2012 Daniel Veillard. All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
 IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.47 apk-tools 2.14.6-r3

1.47.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share

and change it. By contrast, the GNU General Public License is intended to
guarantee your freedom to share and change free software--to make sure the
software is free for all its users. This General Public License applies to
most of the Free Software Foundation's software and to any other program whose
authors commit to using it. (Some other Free Software Foundation software
is covered by the GNU Lesser General Public License instead.) You can apply
it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our
General Public Licenses are designed to make sure that you have the
freedom
to distribute copies of free software (and charge for this service if you
wish), that you receive source code or can get it if you want it, that you
can change the software or use pieces of it in new free programs; and that
you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to
deny you these rights or to ask you to surrender the rights. These restrictions
translate to certain responsibilities for you if you distribute copies of
the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or
for a fee, you must give the recipients all the rights that you have. You
must make sure that they, too, receive or can get the source code. And you
must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2)
offer you this license which gives you legal permission to copy, distribute
and/or modify the software.

Also, for
each author's protection and ours, we want to make certain that
everyone understands that there is no warranty for this free software. If
the software is modified by someone else and passed on, we want its recipients
to know that what they have is not the original, so that any problems introduced
by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We
wish to avoid the danger that redistributors of a free program will individually
obtain patent licenses, in effect making the program proprietary. To prevent
this, we have made it clear that any patent must be licensed for everyone's
free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification
follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice
placed by the copyright holder saying it may be distributed under
the terms
of this General Public License. The "Program", below, refers to any such program
or work, and a "work based on the Program" means either the Program or any
derivative work under copyright law: that is to say, a work containing the
Program or a portion of it, either verbatim or with modifications and/or translated
into another language. (Hereinafter, translation is included without limitation
in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered
by this License; they are outside its scope. The act of running the Program
is not restricted, and the output from the Program is covered only if its
contents constitute a work based on the Program (independent of having been
made by running the Program). Whether that is true depends on what the Program
does.

1. You may copy and distribute verbatim copies of the Program's source code
as you receive it, in any medium, provided that you conspicuously
and appropriately
publish on each copy an appropriate copyright notice and disclaimer of warranty;
keep intact all the notices that refer to this License and to the absence
of any warranty; and give any other recipients of the Program a copy of this
License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you
may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it,
thus forming a work based on the Program, and copy and distribute such modifications
or work under the terms of Section 1 above, provided that you also meet all
of these conditions:

a) You must cause the modified files to carry prominent notices stating that
you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or
in part contains or is derived from the Program or any part thereof, to be
licensed as a whole at no charge
to all third parties under the terms of this
License.

c) If the modified program normally reads commands interactively when run,
you must cause it, when started running for such interactive use in the most
ordinary way, to print or display an announcement including an appropriate
copyright notice and a notice that there is no warranty (or else, saying that
you provide a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this License.

(Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works.
But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it
with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means

all
the source code for all modules it contains, plus any associated interface
definition files, plus the scripts used to control compilation and installation
of the executable. However, as a special exception, the source code distributed
need not include anything that is normally distributed (in either source or
binary form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component itself
accompanies the executable.

If distribution of executable or object code is made by offering access to
copy from a designated place, then offering equivalent access to copy the
source code from the same place counts as distribution of the source code,
even though third parties are not compelled to copy the source along with
the object code.

4. You may not copy, modify, sublicense, or distribute the Program except
as expressly provided under this License. Any attempt otherwise to copy, modify,
sublicense or distribute the Program
is void, and will automatically terminate
your rights under this License. However, parties who have received copies,
or rights, from you under this License will not have their licenses terminated
so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed
it. However, nothing else grants you permission to modify or distribute the
Program or its derivative works. These actions are prohibited by law if you
do not accept this License. Therefore, by modifying or distributing the Program
(or any work based on the Program), you indicate your acceptance of this License
to do so, and all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program),
the recipient automatically receives a license from the original licensor
to copy, distribute or modify the Program subject to these terms and conditions.
You may
not impose any further restrictions on the recipients' exercise of
the rights granted herein. You are not responsible for enforcing compliance
by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement
or for any other reason (not limited to patent issues), conditions are imposed
on you (whether by court order, agreement or otherwise) that contradict the
conditions of this License, they do not excuse you from the conditions of
this License. If you cannot distribute so as to satisfy simultaneously your
obligations under this License and any other pertinent obligations, then as
a consequence you may not distribute the Program at all. For example, if a
patent license would not permit royalty-free redistribution of the Program
by all those who receive copies directly or indirectly through you, then the

only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse

of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE
THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best
way to achieve this is to make it free software
which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and an idea of what it does.>

Copyright (C)< yyyy> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS

FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a
copy of the GNU General Public License along with
this program; if not, write to the Free Software Foundation, Inc., 51 Franklin
Street, Fifth Floor, Boston, MA 02110-1301, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when
it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author Gnomovision comes
with ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software,
and you are welcome to redistribute it under certain conditions; type `show
c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may be
called something other than `show w' and `show c'; they could even be mouse-clicks
or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school,
if any, to sign a "copyright
disclaimer" for the program, if necessary. Here
is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision'
(which makes passes at compilers) written by James Hacker.

<signature of Ty Coon >, 1 April 1989 Ty Coon, President of Vice This General
Public License does not permit incorporating your program into proprietary
programs. If your program is a subroutine library, you may consider it more
useful to permit linking proprietary applications with the library. If this
is what you want to do, use the GNU Lesser General Public License instead
of this License.

1.48 github.com/aws/aws-sdk-go-v2/config 1.31.6

1.48.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
```

```
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string
```

```
// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
```

```
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
```

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength

SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer

```
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}
```

```
type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
```

```
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
```

```
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for \n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                  "smithy.api#required": {}
               }
            },
```

```
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
```

```
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
```

```
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
```

```
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
```

```
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
     },
     "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
```

```
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

        }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
            "type": "structure",
            "members": {
                "Username": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                    }
                },
                "InstanceId": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                    }
                },
                "IdentityProvider": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                    "traits": {
                        "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                    }
                },
                "InstanceUserArn": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                    "traits": {
                        "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                    }
                },
                "Domain": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                    }
                }
            },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },

   "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
```

```
            },
            "Operation": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
               }
            },
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
         "type": "union",
         "members": {
            "ActiveDirectoryIdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
    "type": "list",
```

```
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
```

```
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },

      "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
          },
          "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
           "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

           "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
```

```
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
```

```
    {
      "fn": "isSet",
      "argv": [
        {
          "ref": "Endpoint"
        }
      ]
    }
  ],
 "rules": [
    {
      "conditions": [
        {
          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseFIPS"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [
        {

          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseDualStack"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [],
      "endpoint": {
        "url": {
          "ref": "Endpoint"
        },
```

```
        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "aws.partition",

                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseFIPS"
                                        },

true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
```

```
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

            ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
```

```
                                    "endpoint": {
                                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

    ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [

 {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "fn": "getAttr",
                                                "argv": [

                    {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsFIPS"
```

```
                                ]
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
```

```
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

            }
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

                        ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                        },
                        "type": "endpoint"
                    }
```

```
                    ],
                    "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ]
          },
          "smithy.rules#endpointTests": {
            "testCases": [
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "us-east-1",

        "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
```

```
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
```

```
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
           "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
```

```
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
```

```
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
```

```
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack":
false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
              "expect": {
                "endpoint": {
                  "url": "https://example.com"
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",
```

```
                    "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
        "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
```

```
            }
        },
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>"
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
```

```
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
              "value": "PROVISIONED",
              "documentation": ""
            },
            {
              "name": "DELETING",
              "value": "DELETING",
```

```
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
    "type": "structure",
     "members": {
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
            }
        },
        "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
            "smithy.api#required": {}
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
 <ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
 </li>\n        </ul>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
 {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
```

```
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
```

```
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n        <p>Status</p>\n        </li>\n        <li>\n        <p>Username</p>\n
</li>\n        <li>\n        <p>Domain</p>\n        </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{ResourceArn}"
           },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
```

```
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
```

```
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

         }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
```

```
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {

      "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a product for this user.</p>",
            "smithy.api#required": {}
          }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
```

```
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
              }
```

```
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
```

```
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
                "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
      "members": {
        "RdsSalSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
```

```
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                    "smithy.api#required": {}
                }
            }
        },

        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
```

```
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
             "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
```

```
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
              "code": 200,
              "method": "POST",
              "uri": "/user/StopProductSubscription"
            }
          }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
          }
        },
        "Product": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
          }
        },
        "ProductUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
          }
         }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
```

```
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
```

```
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
                }
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
        <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n                <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n        </ul>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
            "AddSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
                    "smithy.api#required":
```

```
{}
                }
            },
            "RemoveSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string
```

```
 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
```

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
```

```
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData
```

```
// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
```

```
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string
```

```
// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {
```

```
// Date when the license is deleted.
DeletionDate *string

// License status.
Status types.LicenseDeletionStatus

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
```

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
```

```
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
```

RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                 }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
```

```
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

           "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
          }
        },
        "StatusMessage": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
          "traits": {
            "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
          }
        },
        "HomeRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
        },
        "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
        },
        "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
        },
        "RegisteredWithSubscriptionProvider": {
```

```
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
      "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
        "x-amzn-trace-id"
      ],
      "additionalExposedHeaders": [
        "x-amzn-errortype",
        "x-amzn-requestid",
        "x-amzn-trace-id"
      ]
    },
    "smithy.api#documentation": "<p>With License Manager,
```

```
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                 {
                   "fn": "isSet",
                   "argv": [
                      {
                         "ref": "Endpoint"
                      }
                   ]
                 }
              ],
              "rules": [
                 {
```

```
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }

            ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
```

```
    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {

                                    "ref": "UseFIPS"
                                        },
                                        true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
```

```
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }

  ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"

            },
                                "supportsFIPS"
                              ]
                            }
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [

                               {
                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                              ]
                            }
                          ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
```

```
        "rules": [
                                                {
                                                   "conditions": [],
                                                   "endpoint": {
                                                      "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                      "properties": {},
                                                      "headers": {}
                                                   },
                                                   "type": "endpoint"
                                                }
                                             ],

                                    "type": "tree"
                                          }
                                       ],
                                       "type": "tree"
                                    },
                                    {
                                       "conditions": [],
                                       "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                                       "type": "error"
                                    }
                                 ],
                                 "type": "tree"
                              },
                              {

                     "conditions": [
                                    {
                                       "fn": "booleanEquals",
                                       "argv": [
                                          {
                                             "ref": "UseFIPS"
                                          },
                                          true
                                       ]
                                    }
                                 ],
                                 "rules": [
                                    {
                                       "conditions": [
                                          {

                              "fn": "booleanEquals",
                                          "argv": [
                                             {
```

```
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled
but this partition does not support FIPS",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
```

```
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true

                            ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [
                                                        {

                                                        "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],
                                            "type": "tree"

                                }
                                    ],
```

```
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {

         "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
              }

    },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
           },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

       },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
```

```
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

  "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
              }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
```

```
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
```

```
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
```

```
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Instances"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
   <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
          <li>\n              <p>\n                <code>DualSubscription</code>\n              </p>\n            </li>\n
 <li>\n              <p>\n                <code>InstanceID</code>\n              </p>\n            </li>\n            <li>\n
   <p>\n                <code>InstanceType</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
     <code>ProductCode</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>Region</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>Status</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>UsageOperation</code>\n              </p>\n            </li>\n          </ul>\n          <p>For each filter, you can use
 one of the following <code>Operator</code> values to \n    \t\tdefine the behavior of the filter:</p>\n          <ul>\n
     <li>\n              <p>\n                <code>contains</code>\n              </p>\n            </li>\n            <li>\n
 <p>\n                <code>equals</code>\n              </p>\n            </li>\n            <li>\n
```

```
<p>\n <code>Notequal</code>\n </p>\n </li>\n </ul>"
        }
      },
      "MaxResults": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
        "traits": {
          "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
          "smithy.api#length": {
            "min": 1,
            "max": 16384
          }
        }
      }
    },
    "traits": {
      "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
    "type": "structure",
    "members": {
      "Instances": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
        "traits": {
          "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
        }
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
    "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those
that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n
<code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n
<li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n
<p>The valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n
```

```
<code>contains</code>\n </p>\n </li>\n <li>\n <p>\n
<code>equals</code>\n </p>\n </li>\n <li>\n <p>\n
<code>Notequal</code>\n </p>\n </li>\n </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "RegisteredSubscriptionProviders"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSources": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

  "traits": {
            "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
          }
```

```
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
            "smithy.api#range": {
              "min": 1,
              "max": 100
            }
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
          }
        }
      },

      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
```

```
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {
```

```
    "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
          "type": "structure",
          "members": {
```

```
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
               "traits": {
                 "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                 "smithy.api#required": {}
               }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                 "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {

          "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                 "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
              }
            },
            "SubscriptionProviderArn": {
              "target": "smithy.api#String",
              "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
```

```
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
              }
            },
            "SubscriptionProviderStatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
              }
```

```
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {

                  "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "InProgress",
```

```
            "value": "InProgress",
            "documentation": "InProgress status"
          },
          {
            "name": "Completed",
            "value": "Completed",
            "documentation": "Completed status"
          },
          {
            "name": "Successful",
            "value": "Successful",
            "documentation": "Successful status"
          },
          {
            "name": "Failed",
            "value": "Failed",
            "documentation": "Failed status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

     "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
"list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
```

```
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
      "type": "map",
      "key":
{
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tagKeys": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
```

```
        "traits": {
            "smithy.api#input":
{}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
```

```
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
            }
        },
        "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
            }
        },
        "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
        }

    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
    "type": "structure",
    "members": {
      "LinuxSubscriptionsDiscovery": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
        "traits": {
          "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
        }
      },
      "LinuxSubscriptionsDiscoverySettings": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
        "traits": {
          "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
        }

  },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
```

```
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all

other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.49 ada-libs 2.9.2-r1

1.49.1 Available under license :

No license file was found, but licenses were detected in source scan.

/* abuild-tar.c - A TAR mangling utility for .APK packages
*
* Copyright (C) 2009 Timo Teräs <timo.teras@iki.fi>
* All rights reserved.
*
* This program is free software; you can redistribute it and/or modify it
* under the terms of the GNU General Public License version 2 as published
* by the Free Software Foundation. See http://www.gnu.org/ for details.
*/

Found in path(s):
* /aports-v2-9-2-zip/aports-v2.9.2/abuild-tar.c
No license file was found, but licenses were detected in source scan.

Distributed under GPL-2

Found in path(s):
* /aports-v2-9-2-zip/aports-v2.9.2/newapkbuild.in
* /aports-v2-9-2-zip/aports-v2.9.2/abuild.in
* /aports-v2-9-2-zip/aports-v2.9.2/abuild-keygen.in
* /aports-v2-9-2-zip/aports-v2.9.2/abuild-sign.in

1.50 libffi 3.4.7-r0

1.50.1 Available under license :

The libffi source distribution contains certain code that is not part
of libffi, and is only used as tooling to assist with the building and
testing of libffi. This includes the msvcc.sh script used to wrap the
Microsoft compiler with GNU compatible command-line options,
make_sunver.pl, and the libffi test code distributed in the
testsuite/libffi.bhaible directory. This code is distributed with

libffi for the purpose of convenience only, and libffi is in no way
derived from this code.

msvcc.sh an testsuite/libffi.bhaible are both distributed under the
terms of the GNU GPL version 2, as below.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software
are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions
that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program

a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices
stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

c) If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the
most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose
permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program

with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License.

However, parties who have
received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

5. You are not required to accept this License, since you have not
signed it. However, nothing else grants you permission to modify or
distribute the Program or its derivative works. These actions are
prohibited by law if you do not accept this License. Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions. You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You
are not responsible for enforcing compliance by third parties to
this License.

7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Program at all. For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance
of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed

through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY

AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

  Gnomovision version 69, Copyright (C) year name of author
  Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
  This is free software, and you are welcome to redistribute it
  under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work
 as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
libffi - Copyright (c) 1996-2024 Anthony Green, Red Hat, Inc and others.
See source files for details.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
``Software''), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED ``AS IS'', WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF

CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.51 aws-sdk-go-v2-feature-s3-manager 1.19.4

1.51.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

```
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
```

```
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string

 // Product name.
 //
 // This member is required.
 ProductName *string

 // Product SKU.
```

```
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
```

```
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

```
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
```

```
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
return &awsmiddleware.RegisterServiceMetadata{
 Region:       region,
 ServiceID:    ServiceID,
 OperationName: "ListReceivedLicenses",
}
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
              "target": "smithy.api#String"
           }
        },
        "traits": {
           "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
           "smithy.api#error": "client"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
           "DirectoryId": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
            "traits": {
              "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
            }
          },
          "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
```

```
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
```

```
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
                  "smithy.api#required": {}
               }
            },
             "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
               }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
```

```
        },
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
```

```
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}

      }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Directory": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
```

```
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary":
{
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
         "type": "structure",
         "members": {
            "Subnets": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
               "traits": {
                  "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                  "smithy.api#length": {
                     "min": 1
                  },
```

```
    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
    "type": "structure",
    "members": {
        "Username": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

"IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
```

```
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
               }
            },
            "AssociationDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
               }
            },
            "DisassociationDate": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
         "type": "list",
```

```
    "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
      "message": {
        "target": "smithy.api#String"
      }
    },
    "traits": {
      "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
       "smithy.api#error": "server",
      "smithy.api#httpError": 500
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
      "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
       },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
      },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

      "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
```

```
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id",
                "content-length",

            "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
```

```
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
             ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [
                  {

                    "fn": "booleanEquals",
                    "argv": [
                      {
```

```
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "aws.partition",

                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

true

```
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
```

"fn": "booleanEquals",

```
                            "argv": [
                              true,
                              {
                                "fn": "getAttr",
                                "argv": [
                                  {
                                    "ref": "PartitionResult"
                                  },
                                  "supportsFIPS"
                                ]
                              }
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              true,
```

```
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }

    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [

 {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
```

```
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [

        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {

    "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {

        "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]

          }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }

            ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
```

```
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                            "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect":
{
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
```

```
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint":
{
                  "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
```

```
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
```

```
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
 false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
 disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
```

```
                    }
                },
                {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                        "Region": "us-east-1",
                        "UseFIPS": false,
                        "UseDualStack": true,
                        "Endpoint": "https://example.com"
                    }
                },
                {
                    "documentation": "Missing region",
                    "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
        "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
                }
            },
            "LicenseServers": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
                "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
                }
            },
            "CreationTime": {
                "target": "smithy.api#Timestamp",
                "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                "name": "PROVISIONING",
                "value": "PROVISIONING",
```

```
            "documentation": ""
          },
          {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
          },
          {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
```

```
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
          "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
</li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
              }
            },
             "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
```

```
            }
          },
          "NextToken":
{
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/license-server/ListLicenseServerEndpoints"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "LicenseServerEndpoints"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
      "type": "structure",
      "members": {
```

```
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                  "smithy.api#range": {
                     "min": 1,
                     "max": 100
                  }
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

     "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
          },
          "errors": [
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListUserAssociations"
             },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "InstanceUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
```

```
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

        }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
```

```
 "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

          "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
              "target": "smithy.api#String",
              "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
              }
            },
            "SubscriptionEndDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
          "type": "structure",
          "members": {
            "RdsSalCredentialsProvider": {
```

```
        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
           }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
```

```
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
```

```
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",

        "traits": {
              "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
              "smithy.api#length": {
                "min": 1
              }
            }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
              "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
          "type": "structure",
          "members": {
            "Endpoint": {

           "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
          "type": "union",
          "members": {
            "RdsSalSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },
```

```
        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
             "traits": {
               "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/StopProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "ProductUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
```

```
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                "smithy.api#httpLabel": {},
```

```
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
    "type": "structure",
    "members": {},
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#Tags": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    },
    "traits": {
        "smithy.api#length": {
            "min": 0,
            "max": 50
        },
        "smithy.api#sensitive": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
```

```
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                     "smithy.api#required": {}
                }
```

```
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
```

```
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
```

```
        }
      }
    }
  }
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
```

```
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
```

```
//
//   - Status
Filters
[]types.Filter

// Amazon Resource Names (ARNs) of the licenses.
LicenseArns []string

// Maximum number of results to return in a single call.
MaxResults *int32

// Token for the next set of results.
NextToken *string

noSmithyDocumentSerde
}

type ListLicensesOutput struct {

// License details.
Licenses []types.License

// Token for the next set of results.
NextToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
```

```
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
```

```
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
```

```
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
```

```
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
```

```
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
```

```
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
```

```
    // This member is required.
    CheckoutType types.CheckoutType

    // Unique, case-sensitive identifier that you provide to ensure the idempotency of
    // the request.
    //
    // This member is required.
    ClientToken *string

    // License entitlements.
    //
    // This member is required.
    Entitlements []types.EntitlementData

    // Key fingerprint identifying the license.
    //
    // This member is required.
    KeyFingerprint *string

    // Product SKU.
    //
    // This member is required.
    ProductSKU *string

    // License beneficiary.
    Beneficiary *string

    // Node ID.
    NodeId *string

    noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

    // Checkout type.
    CheckoutType types.CheckoutType

    // Allowed license entitlements.
    EntitlementsAllowed []types.EntitlementData

    // Date and time at which the license checkout expires.
    Expiration *string

    // Date and time at which the license checkout is issued.
    IssuedAt *string

    // Amazon Resource Name (ARN) of the checkout license.
```

```
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
```

```
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
```

```
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
```

```
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
```

```
//
// This member is required.
Workspace *types.WorkspaceDescription

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string
```

```
 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
```

```
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
```

```
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
```

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR

```
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string
```

```
 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
```

```
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
```

```
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
```

```
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
```

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
```

```
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
         "type": "structure",
         "members": {
            "SubscriptionProviderArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
         "type": "structure",
         "members": {
            "SubscriptionProviderArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
               }
            },
            "SubscriptionProviderSource": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

          "traits": {
                  "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
               }
            },
            "SecretArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
               }
```

```
            },
            "SubscriptionProviderStatus": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
               "traits": {
                  "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
               }
            },
            "SubscriptionProviderStatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
               }
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
         "type": "operation",
         "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
```

```
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
          "type": "structure",
          "members": {}
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
              }
            },
            "Status": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
              }
            },
            "StatusMessage": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
              "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
              }
            },
            "HomeRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
```

```
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
            "AmiId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
                }
            },
            "InstanceID": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
                }
            },
            "InstanceType": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The instance type of the resource.</p>"
                }
            },
            "AccountID": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the instance.</p>"
                }
            },
            "Region": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
                }
            },
            "UsageOperation": {
```

```
            "target": "smithy.api#String",

    "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
              "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
          },
          "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
          "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
            }
          },
          "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
```

```
registered \n\t\t\tthird-party Linux subscription provider.</p>"
                }
            },
            "DualSubscription": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
                }
            },
            "RegisteredWithSubscriptionProvider": {
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
         },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
```

```
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
```

```
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }

        ],
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {
                              "ref": "UseDualStack"
                            },
                            true
                          ]

}
                      ],
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                      "type": "error"
                    },
                    {
                      "conditions": [],
                      "endpoint": {
```

```
                "url": {
                  "ref": "Endpoint"
                },
                "properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ],
          "type": "tree"

      }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "rules": [
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Region"
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {

    "fn": "aws.partition",
                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
```

```
                "argv": [
                  {

              "ref": "UseFIPS"
                  },
                  true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }

],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"

        },
                              "supportsFIPS"
                          ]
                        }
                      ]
                    },
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [

                           {
                                "ref": "PartitionResult"
```

```
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {

        "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
                            true
```

```
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

          "fn": "booleanEquals",
                      "argv": [
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        },
                        true

                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [
                      {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
                      }
                    ],
                    "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS is enabled
```

```
but this partition does not support FIPS",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseDualStack"
                                        },
                                        true

                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [
                                                        {

                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
```

```
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"

                            }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
```

```
            ],
            "type": "tree"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

    }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {

     "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
```

```
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                }

        },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
```

```
    },
    "params": {
      "Region": "cn-north-1",
      "UseFIPS": false,
      "UseDualStack": true
    }
  },
  {
    "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
      }
    },
    "params": {
      "Region": "cn-north-1",
      "UseFIPS": false,
      "UseDualStack": false
    }
  },
  {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
      }
    },
    "params": {
      "Region": "us-gov-east-1",
      "UseFIPS": true,
      "UseDualStack": true
    }
  },
  {
    "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
      }

   },
    "params": {
      "Region": "us-gov-east-1",
      "UseFIPS": true,
      "UseDualStack": false
    }
  },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }

                },
                  "params": {
                    "Region": "us-iso-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
                    }
                  },
```

```
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
```

```
        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

        "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "Missing region",

          "expect": {
              "error": "Invalid Configuration: Missing Region"
            }
          }
        ],
```

```
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
              "name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
```

```
<li>\n <p>\n <code>DualSubscription</code>\n </p>\n </li>\n
<li>\n <p>\n <code>InstanceID</code>\n </p>\n </li>\n <li>\n
<p>\n <code>InstanceType</code>\n </p>\n </li>\n <li>\n <p>\n
<code>ProductCode</code>\n </p>\n </li>\n <li>\n <p>\n
<code>Region</code>\n </p>\n </li>\n <li>\n <p>\n
<code>Status</code>\n </p>\n </li>\n <li>\n <p>\n
<code>UsageOperation</code>\n </p>\n </li>\n </ul>\n <p>For each filter, you can use
one of the following <code>Operator</code> values to \n \t\tdefine the behavior of the filter:</p>\n <ul>\n
<li>\n <p>\n <code>contains</code>\n </p>\n </li>\n <li>\n
<p>\n <code>equals</code>\n </p>\n </li>\n <li>\n
<p>\n <code>Notequal</code>\n </p>\n </li>\n </ul>"
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 16384
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
      "type": "structure",
      "members": {
        "Instances": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
```

```
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

        "traits": {
            "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n more sets of key-value pairs that you specify. For example, you can filter by the name of\n <code>Subscription</code> with an optional operator to see subscriptions that match,\n partially match, or don't match a certain subscription's name.</p>\n <p>The valid names for this filter are:</p>\n <ul>\n <li>\n <p>\n <code>Subscription</code>\n </p>\n </li>\n </ul>\n <p>The valid Operators for this filter are:</p>\n <ul>\n <li>\n <p>\n <code>contains</code>\n </p>\n </li>\n <li>\n <p>\n <code>equals</code>\n </p>\n </li>\n <li>\n <p>\n <code>Notequal</code>\n </p>\n </li>\n </ul>"
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 16384
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSources": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

  "traits": {
            "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
            "smithy.api#range": {
              "min": 1,
              "max": 100
            }
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
          }
        }
      },

      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
```

isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects. "
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": " List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource. ",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": " The Amazon Resource Name (ARN) of the resource for which to list metadata tags. ",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

```
        }
      }
    },
    "traits": {
      "smithy.api#input": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
            },
            {

"name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
             "traits": {
               "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
               "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
               "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
               "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
```

```
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
```

access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token. "
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {

                    "smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
                }
            }
        },
        "traits": {
            "smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": " Unable to find the requested Amazon Web Services resource. ",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {

```
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "InProgress",
                "value": "InProgress",
                "documentation": "InProgress status"
              },
              {
                "name": "Completed",
                "value": "Completed",
                "documentation": "Completed status"
              },
              {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
              },
              {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#length": {
                "min": 1,
                "max": 100
              }
            }
          },
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            },
            "smithy.api#uniqueItems": {}
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
      "target": "smithy.api#String"
    },
    "value": {
      "target": "smithy.api#String"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
      "Name": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The name of the subscription.</p>"
        }
      },
      "Type": {
        "target": "smithy.api#String",
        "traits": {

   "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
        }
      },
      "InstanceCount": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
        "traits": {
          "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
    "type": "list",

   "member": {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
    }
  },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
```

```
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

  "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
```

```
            "tagKeys": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input":
 {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/UpdateServiceSettings"
```

```
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
```

settings include if Organizations\n integration has been enabled, and which Regions data will be aggregated from. "
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": " Indicates the status of Linux subscriptions settings being applied. "
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": " A message which details the Linux subscriptions service settings current status. "
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": " The Region in which License Manager displays the aggregated data for Linux\n subscriptions. "
                }
             }
          }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
              "message": {
                  "target": "smithy.api#String"
              }
          },
          "traits": {
              "smithy.api#documentation": " The provided input is not valid. Try your request again. ",
              "smithy.api#error": "client"
          }
      }
  }
}

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner

or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices

stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions

InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2

disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.52 libstdc++ 14.2.0-r4

1.52.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed
to make sure that you
have the freedom to distribute copies of free software (and charge for

this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute
and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work
which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in

the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim
copies of the Program's
source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in

whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program,

and can be reasonably
considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work
based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial distribution and only if you
received the program in object code
or executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include

anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy
the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6.
Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free

redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through
any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the Program
specifies a version
number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free

programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE
LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS),
EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify

it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the
License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands
`show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

This program, "bzip2", the associated library "libbzip2", and all
documentation, are copyright (C) 1996-2010 Julian R Seward. All
rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.

2. The origin of this software must not be misrepresented; you must
  not claim that you wrote the original software. If you use this
  software in a product, an acknowledgment in the product
  documentation would be appreciated but is not required.

3. Altered source versions must be plainly marked as such, and must
  not be misrepresented as being the original software.

4. The name of the author may not be used to endorse or promote
  products derived from this software without specific
 prior written
  permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, jseward@bzip.org
bzip2/libbzip2 version 1.0.6 of 6 September 2010

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies

of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that
there is no warranty for the free library. Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation will not be affected by problems that might be
introduced by others.

Finally, software
patents pose a constant threat to the existence of
any free program. We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder. Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License. This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License. We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

When a program is linked with a library, whether statically or using
a shared library, the combination of the two is legally speaking a
combined work, a derivative of the original library. The ordinary
General Public License therefore permits
such linking only if the
entire combination fits its criteria of freedom. The Lesser General
Public License permits more lax criteria for linking other code with
the library.

We call this license the "Lesser" General Public License because it
does Less to protect the user's freedom than the ordinary General
Public License. It also provides other free software developers Less
of an advantage over competing non-free programs. These disadvantages
are the reason we use the ordinary General Public License for many
libraries. However, the Lesser license provides advantages in certain
special circumstances.

For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it
becomes a de-facto standard. To achieve this, non-free programs must
be allowed to use the library. A more frequent case is that a free
library does the same job as widely used non-free libraries. In this
case, there is little to gain by limiting the
free library to free
software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to
run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another
language. (Hereinafter, translation is
included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control
compilation and installation of the library.

Activities other than copying, distribution and modification are not

covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably
considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary
GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding
machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by

this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the
work with the complete corresponding
machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly
with a modified version of the library, if
the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally
distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies

the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein.

You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse
you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system
which is
implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish
revised and/or new
versions of the Lesser General Public License from time to time.

Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this. Our
decision will
be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE
LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

The libffi source distribution contains certain code that is not part
of libffi, and is only used as tooling to assist with the building and
testing of libffi. This includes the msvcc.sh script used to wrap the
Microsoft compiler with GNU compatible command-line options,
make_sunver.pl, and the libffi test code distributed in the
testsuite/libffi.bhaible directory. This code is distributed with
libffi for the purpose of convenience only, and libffi is in no way
derived from this code.

msvcc.sh an testsuite/libffi.bhaible are both distributed under the
terms of the GNU GPL version 2, as below.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software
are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions
that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by
others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program
or a portion of it,
either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not

compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY

FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY
AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve
this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more
details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work
as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
==========
The LLVM Project is under the Apache License v2.0 with LLVM Exceptions:
==========

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,

and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the
power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached
to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition,
"submitted"
means any form of electronic, verbal, or written communication sent

to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and

attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work
includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional
attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License
does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or

implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including
negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such
obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.

You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

---- LLVM Exceptions to the Apache 2.0 License ----

As an exception, if, as a result of your compiling your source code, portions
of this Software are embedded into an Object form of such source code, you
may redistribute such embedded portions in such Object form without complying
with the conditions of Sections 4(a), 4(b) and 4(d) of the License.

In addition, if you combine or link compiled
forms of this Software with
software that is licensed under the GPLv2 ("Combined Software") and if a
court of competent jurisdiction determines that the patent provision (Section
3), the indemnity provision (Section 9) or other Section of the License
conflicts with the conditions of the GPLv2, you may retroactively and
prospectively choose to deem waived or otherwise exclude such Section(s) of
the License, but only in their entirety and only with respect to the Combined
Software.

==
Software from third parties included in the LLVM Project:
==
The LLVM Project contains third party software which is under different license
terms. All such code will be identified clearly using at least one of two
mechanisms:
1) It will be in a separate directory tree with its own `LICENSE.txt` or
`LICENSE` file at the top containing the specific
license and restrictions
which apply to that software, or
2) It will contain specific license and restriction terms at the top of every
file.

==
Legacy LLVM License (https://llvm.org/docs/DeveloperPolicy.html#legacy):
==

The software contained in this directory tree is dual licensed under both the
University of Illinois "BSD-Like" license and the MIT license. As a user of
this code you may choose to use it under either license. As a contributor,

you agree to allow your code to be used under both.

Full text of the relevant licenses is included below.

==

University of Illinois/NCSA
Open Source License

Copyright (c) 2017-2019 by the contributors listed in CREDITS.TXT

All rights reserved.

Developed by:
  Threading Runtimes Team
  Intel Corporation
   http://www.intel.com

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal with
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

  * Redistributions of source code must retain the above copyright notice,
    this list of conditions and the following disclaimers.

  * Redistributions in binary form must reproduce the above copyright notice,
    this list of conditions and the following disclaimers in the
    documentation and/or other materials provided with the distribution.

  * Neither the names of Intel Corporation Threading Runtimes Team nor the
    names of its contributors may be used to endorse or promote products
    derived from
this Software without specific prior written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE
SOFTWARE.

==

Copyright (c) 2017-2019 by the contributors listed in CREDITS.TXT

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software,
and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.
GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide to use it. You
can use it too, but we
suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use,
not price. Our General Public Licenses are designed to make sure that

you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a

combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination
fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we
use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of

this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without
limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish
on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License

to a given copy of the Library. To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License. (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.) Do not make any other change in
these notices.

Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be
distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library". Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that uses the
library". The executable is therefore covered
by this License.
Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library. The
threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any
executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable
source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the

user installs one, as long as the modified version is
interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at
least three years, to give the same user the materials
specified in Subsection 6a, above, for a charge no more
than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy
from a designated place, offer equivalent access to copy the above
specified materials from the same place.

e) Verify that the user has already received a copy of these
materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it. However, as a special exception,
the materials to be distributed need not include anything that is
normally distributed (in either source or binary form) with
the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system. Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

7. You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work
based on the Library, uncombined with any other library
facilities. This must be distributed
under the terms of the
Sections above.

b) Give prominent notice with the combined library of the fact
that part of it is a work based on the Library, and explaining
where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying
or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute
so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is

implemented by public license practices. Many
people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

13. The Free Software Foundation may publish revised and/or new
versions of the Lesser General Public
License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this. Our
decision will be guided by the two goals of preserving the free
status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR

OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL
DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line
and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You
should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization
obtaining a copy of the software and accompanying documentation covered by
this license (the "Software") to use, reproduce, display, distribute,
execute, and transmit the Software, and to prepare derivative works of the
Software, and to permit third-parties to whom the Software is furnished to
do so, all subject to the following:

The copyright notices in the Software and this entire statement, including
the above license grant, this restriction and the following disclaimer,
must be included in all copies of the Software, in whole or in part, and
all derivative works of the Software, unless such copies or derivative
works are solely in the form of machine-executable object code generated by
a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT
SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or

agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Copyright (c) 2011 University of Illinois at Urbana-Champaign. All rights reserved.

Developed by: Polaris Research Group
University of Illinois at Urbana-Champaign
http://polaris.cs.uiuc.edu

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal with the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

1. Redistributions of source code must retain the above copyright notice,
   this list of conditions and the following disclaimers.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimers in the
   documentation and/or other materials provided with the distribution.
3. Neither the names of Polaris Research Group, University of Illinois at
   Urbana-Champaign, nor the names of its contributors may be used to endorse
   or promote products derived from this Software without specific prior
   written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
WITH THE SOFTWARE.

GCC RUNTIME LIBRARY EXCEPTION

Version 3.1, 31 March 2009

Copyright (C) 2009 Free Software Foundation, Inc. <http://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies of this
license document, but changing it is not allowed.

This GCC Runtime Library Exception ("Exception") is an additional permission under section 7 of the GNU General Public License, version 3 ("GPLv3"). It applies to a given file (the "Runtime Library") that bears a notice placed by the copyright holder of the file stating that the file is governed by GPLv3 along with this Exception.

When you use GCC to compile a program, GCC may combine portions of certain GCC header files and runtime libraries with the compiled program. The purpose of this Exception is to allow compilation of non-GPL (including proprietary) programs to use, in this way, the header files and runtime libraries covered by this Exception.

0. Definitions.

A file is an "Independent Module" if it either requires the Runtime Library
for execution after a Compilation Process, or makes use of an interface provided by the Runtime Library, but is not otherwise based on the Runtime Library.

"GCC" means a version of the GNU Compiler Collection, with or without modifications, governed by version 3 (or a specified later version) of the GNU General Public License (GPL) with the option of using any subsequent versions published by the FSF.

"GPL-compatible Software" is software whose conditions of propagation, modification and use would permit combination with GCC in accord with the license of GCC.

"Target Code" refers to output from any compiler for a real or virtual target processor architecture, in executable form or suitable for input to an assembler, loader, linker and/or execution phase. Notwithstanding that, Target Code does not include data in any format that is used as a compiler intermediate representation, or used for producing a compiler intermediate representation.

The "Compilation Process" transforms code
entirely represented in
non-intermediate languages designed for human-written code, and/or in Java Virtual Machine byte code, into Target Code. Thus, for example, use of source code generators and preprocessors need not be considered part of the Compilation Process, since the Compilation Process can be understood as starting with the output of the generators or preprocessors.

A Compilation Process is "Eligible" if it is done using GCC, alone or with other GPL-compatible software, or if it is done without using any

work based on GCC. For example, using non-GPL-compatible Software to optimize any GCC intermediate representations would not qualify as an Eligible Compilation Process.

1. Grant of Additional Permission.

You have permission to propagate a work of Target Code formed by combining the Runtime Library with Independent Modules, even if such propagation would otherwise violate the terms of GPLv3, provided that all Target Code was generated by Eligible Compilation Processes. You may
then convey such a combination under terms of your choice, consistent with the licensing of the Independent Modules.

2. No Weakening of GCC Copyleft.

The availability of this Exception does not imply any general presumption that third-party software is unaffected by the copyleft requirements of the license of GCC.
libffi - Copyright (c) 1996-2021 Anthony Green, Red Hat, Inc and others.
See source files for details.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the ``Software''), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED ``AS IS'', WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF
CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
GNU Free Documentation License
Version 1.2, November 2002

Copyright (C) 2000-2024 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies

of this license document, but changing it is not allowed.

0. PREAMBLE

The purpose of this License is to make a manual, textbook, or other functional and useful document "free" in the sense of freedom: to assure everyone the effective freedom to copy and redistribute it, with or without modifying it, either commercially or noncommercially. Secondarily, this License preserves for the author and publisher a way to get credit for their work, while not being considered responsible for modifications made by others.

This License is a kind of "copyleft", which means that derivative works of the document must themselves be free in the same sense. It complements the GNU General Public License, which is a copyleft license designed for free software.

We
have designed this License in order to use it for manuals for free software, because free software needs free documentation: a free program should come with manuals providing the same freedoms that the software does. But this License is not limited to software manuals; it can be used for any textual work, regardless of subject matter or whether it is published as a printed book. We recommend this License principally for works whose purpose is instruction or reference.

1. APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that contains a notice placed by the copyright holder saying it can be distributed under the terms of this License. Such a notice grants a world-wide, royalty-free license, unlimited in duration, to use that work under the conditions stated herein. The "Document", below, refers to any such manual or work. Any member of the public is a licensee, and is addressed as "you". You accept the license if you copy, modify
or distribute the work in a way requiring permission
under copyright law.

A "Modified Version" of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A "Secondary Section" is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject

(or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics.) The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political position regarding them.

The "Invariant Sections" are certain Secondary Sections whose titles are designated, as being those of Invariant Sections, in the notice
that says that the Document is released under this License. If a section does not fit the above definition of Secondary then it is not allowed to be designated as Invariant. The Document may contain zero Invariant Sections. If the Document does not identify any Invariant Sections then there are none.

The "Cover Texts" are certain short passages of text that are listed, as Front-Cover Texts or Back-Cover Texts, in the notice that says that the Document is released under this License. A Front-Cover Text may be at most 5 words, and a Back-Cover Text may be at most 25 words.

A "Transparent" copy of the Document means a machine-readable copy, represented in a format whose specification is available to the general public, that is suitable for revising the document straightforwardly with generic text editors or (for images composed of pixels) generic paint programs or (for drawings) some widely available drawing editor, and that is suitable for input to text formatters or for
automatic translation to a variety of formats suitable for input to text formatters. A copy made in an otherwise Transparent file format whose markup, or absence of markup, has been arranged to thwart or discourage subsequent modification by readers is not Transparent. An image format is not Transparent if used for any substantial amount of text. A copy that is not "Transparent" is called "Opaque".

Examples of suitable formats for Transparent copies include plain ASCII without markup, Texinfo input format, LaTeX input format, SGML or XML using a publicly available DTD, and standard-conforming simple HTML, PostScript or PDF designed for human modification. Examples of transparent image formats include PNG, XCF and JPG. Opaque formats include proprietary formats that can be read and edited only by proprietary word processors, SGML or XML for which the DTD and/or processing tools are not generally available, and the machine-generated HTML, PostScript or PDF produced by some word processors
for output purposes only.

The "Title Page" means, for a printed book, the title page itself, plus such following pages as are needed to hold, legibly, the material this License requires to appear in the title page. For works in formats which do not have any title page as such, "Title Page" means the text near the most prominent appearance of the work's title, preceding the beginning of the body of the text.

A section "Entitled XYZ" means a named subunit of the Document whose title either is precisely XYZ or contains XYZ in parentheses following text that translates XYZ in another language. (Here XYZ stands for a specific section name mentioned below, such as "Acknowledgements", "Dedications", "Endorsements", or "History".) To "Preserve the Title" of such a section when you modify the Document means that it remains a section "Entitled XYZ" according to this definition.

The Document may include Warranty Disclaimers next to the notice which states that this License applies to
the Document. These Warranty
Disclaimers are considered to be included by reference in this License, but only as regards disclaiming warranties: any other implication that these Warranty Disclaimers may have is void and has no effect on the meaning of this License.

2. VERBATIM COPYING

You may copy and distribute the Document in any medium, either commercially or noncommercially, provided that this License, the copyright notices, and the license notice saying this License applies to the Document are reproduced in all copies, and that you add no other conditions whatsoever to those of this License. You may not use technical measures to obstruct or control the reading or further copying of the copies you make or distribute. However, you may accept compensation in exchange for copies. If you distribute a large enough number of copies you must also follow the conditions in section 3.

You may also lend copies, under the same conditions stated above, and you may publicly display copies.

3.
COPYING IN QUANTITY

If you publish printed copies (or copies in media that commonly have printed covers) of the Document, numbering more than 100, and the Document's license notice requires Cover Texts, you must enclose the copies in covers that carry, clearly and legibly, all these Cover Texts: Front-Cover Texts on the front cover, and Back-Cover Texts on

the back cover. Both covers must also clearly and legibly identify you as the publisher of these copies. The front cover must present the full title with all words of the title equally prominent and visible. You may add other material on the covers in addition. Copying with changes limited to the covers, as long as they preserve the title of the Document and satisfy these conditions, can be treated as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit legibly, you should put the first ones listed (as many as fit reasonably) on the actual cover, and continue the rest onto adjacent pages.

If you publish or distribute Opaque copies of the Document numbering more than 100, you must either include a machine-readable Transparent copy along with each Opaque copy, or state in or with each Opaque copy a computer-network location from which the general network-using public has access to download using public-standard network protocols a complete Transparent copy of the Document, free of added material. If you use the latter option, you must take reasonably prudent steps, when you begin distribution of Opaque copies in quantity, to ensure that this Transparent copy will remain thus accessible at the stated location until at least one year after the last time you distribute an Opaque copy (directly or through your agents or retailers) of that edition to the public.

It is requested, but not required, that you contact the authors of the Document well before redistributing any large number of copies, to give them a chance to provide you with an updated version of the Document.

4. MODIFICATIONS

You may copy and distribute a Modified Version of the Document under the conditions of sections 2 and 3 above, provided that you release the Modified Version under precisely this License, with the Modified Version filling the role of the Document, thus licensing distribution and modification of the Modified Version to whoever possesses a copy of it. In addition, you must do these things in the Modified Version:

A. Use in the Title Page (and on the covers, if any) a title distinct from that of the Document, and from those of previous versions (which should, if there were any, be listed in the History section of the Document). You may use the same title as a previous version if the original publisher of that version gives permission.
B. List on the Title Page, as authors, one or more persons or entities

responsible for authorship of the modifications in the Modified Version, together with at least five of the principal authors of the Document (all of its principal authors, if it has fewer than five), unless they release you from this requirement.

C. State on the Title page the name of the publisher of the Modified Version, as the publisher.

D. Preserve all the copyright notices of the Document.

E. Add an appropriate copyright notice for your modifications adjacent to the other copyright notices.

F. Include, immediately after the copyright notices, a license notice giving the public permission to use the Modified Version under the terms of this License, in the form shown in the Addendum below.

G. Preserve in that license notice the full lists of Invariant Sections and required Cover Texts given in the Document's license notice.

H. Include an unaltered copy of this License.

I. Preserve the section Entitled "History", Preserve its Title, and add to it an item stating at least the title, year, new authors, and publisher of the Modified Version as given on the Title Page. If there is no section Entitled "History" in the Document, create one stating the title, year, authors, and publisher of the Document as given on its Title Page, then add an item describing the Modified Version as stated in the previous sentence.

J. Preserve the network location, if any, given in the Document for public access to a Transparent copy of the Document, and likewise the network locations given in the Document for previous versions it was based on. These may be placed in the "History" section. You may omit a network location for a work that was published at least four years before the Document itself, or if the original publisher of the version it refers to gives permission.

K. For any section Entitled "Acknowledgements" or "Dedications", Preserve the Title of the section, and preserve in the section all the substance and tone of each of the contributor acknowledgements and/or dedications given therein.

L. Preserve all the Invariant Sections of the Document, unaltered in their text and in their titles. Section numbers or the equivalent are not considered part of the section titles.

M. Delete any section Entitled "Endorsements". Such a section may not be included in the Modified Version.

N. Do not retitle any existing section to be Entitled "Endorsements" or to conflict in title with any Invariant Section.

O. Preserve any Warranty Disclaimers.

If the Modified Version includes new front-matter sections or appendices that qualify as Secondary Sections and contain no material copied from the Document, you may at your option designate some or all of these sections as invariant. To do this, add their titles to the list of Invariant Sections in the Modified Version's license notice.

These titles must be distinct from any other section titles.

You may add a section Entitled "Endorsements", provided it contains
nothing but endorsements of your Modified Version by various
parties--for example, statements of peer review or that
 the text has
been approved by an organization as the authoritative definition of a
standard.

You may add a passage of up to five words as a Front-Cover Text, and a
passage of up to 25 words as a Back-Cover Text, to the end of the list
of Cover Texts in the Modified Version. Only one passage of
Front-Cover Text and one of Back-Cover Text may be added by (or
through arrangements made by) any one entity. If the Document already
includes a cover text for the same cover, previously added by you or
by arrangement made by the same entity you are acting on behalf of,
you may not add another; but you may replace the old one, on explicit
permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License
give permission to use their names for publicity for or to assert or
imply endorsement of any Modified Version.

5. COMBINING DOCUMENTS

You may combine the Document with other documents released under this
License, under the
 terms defined in section 4 above for modified
versions, provided that you include in the combination all of the
Invariant Sections of all of the original documents, unmodified, and
list them all as Invariant Sections of your combined work in its
license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and
multiple identical Invariant Sections may be replaced with a single
copy. If there are multiple Invariant Sections with the same name but
different contents, make the title of each such section unique by
adding at the end of it, in parentheses, the name of the original
author or publisher of that section if known, or else a unique number.
Make the same adjustment to the section titles in the list of
Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections Entitled "History"
in the various original documents, forming one section Entitled
"History"; likewise
 combine any sections Entitled "Acknowledgements",
and any sections Entitled "Dedications". You must delete all sections

Entitled "Endorsements".

6. COLLECTIONS OF DOCUMENTS

You may make a collection consisting of the Document and other documents released under this License, and replace the individual copies of this License in the various documents with a single copy that is included in the collection, provided that you follow the rules of this License for verbatim copying of each of the documents in all other respects.

You may extract a single document from such a collection, and distribute it individually under this License, provided you insert a copy of this License into the extracted document, and follow this License in all other respects regarding verbatim copying of that document.

7. AGGREGATION WITH INDEPENDENT WORKS

A compilation of the Document or its derivatives with other separate and independent documents or works, in or on a volume of a storage or distribution medium,
is called an "aggregate" if the copyright
resulting from the compilation is not used to limit the legal rights of the compilation's users beyond what the individual works permit. When the Document is included in an aggregate, this License does not apply to the other works in the aggregate which are not themselves derivative works of the Document.

If the Cover Text requirement of section 3 is applicable to these copies of the Document, then if the Document is less than one half of the entire aggregate, the Document's Cover Texts may be placed on covers that bracket the Document within the aggregate, or the electronic equivalent of covers if the Document is in electronic form. Otherwise they must appear on printed covers that bracket the whole aggregate.

8. TRANSLATION

Translation is considered a kind of modification, so you may distribute translations of the Document under the terms of section 4. Replacing Invariant Sections with translations requires special permission from
their copyright holders, but you may include
translations of some or all Invariant Sections in addition to the original versions of these Invariant Sections. You may include a translation of this License, and all the license notices in the

Document, and any Warranty Disclaimers, provided that you also include the original English version of this License and the original versions of those notices and disclaimers. In case of a disagreement between the translation and the original version of this License or a notice or disclaimer, the original version will prevail.

If a section in the Document is Entitled "Acknowledgements", "Dedications", or "History", the requirement (section 4) to Preserve its Title (section 1) will typically require changing the actual title.

9. TERMINATION

You may not copy, modify, sublicense, or distribute the Document except as expressly provided for under this License. Any other attempt to copy, modify, sublicense or distribute the Document is void, and will automatically
terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

10. FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions of the GNU Free Documentation License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. See http://www.gnu.org/copyleft/.

Each version of the License is given a distinguishing version number. If the Document specifies that a particular numbered version of this License "or any later version" applies to it, you have the option of following the terms and conditions either of that specified version or of any later version that has been published (not as a draft) by the Free Software Foundation. If the Document does not specify a version number of this License,
you may choose any version ever published (not as a draft) by the Free Software Foundation.

ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of the License in the document and put the following copyright and license notices just after the title page:

Copyright (c) YEAR YOUR NAME.
Permission is granted to copy, distribute and/or modify this document
under the terms of the GNU Free Documentation License, Version 1.2
or any later version published by the Free Software Foundation;
with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts.
A copy of the license is included in the section entitled "GNU
Free Documentation License".

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts,
replace the "with...Texts." line with this:

with the Invariant Sections being LIST THEIR TITLES, with the
Front-Cover Texts being LIST, and with the Back-Cover Texts
being LIST.

If you have Invariant Sections without Cover Texts, or some other
combination of the three, merge those two alternatives to suit the
situation.

If your document contains nontrivial examples of program code, we
recommend releasing these examples in parallel under your choice of
free software license, such as the GNU General Public License,
to permit their use in free software.
This source code was written by the Go contributors.
The master list of contributors is in the main Go distribution,
visible at http://tip.golang.org/CONTRIBUTORS.
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER

OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps:

(1)
assert copyright on the software, and (2) offer you this License
giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains
that there is no warranty for this free software. For both users' and
authors' sake, the GPL requires that modified versions be marked as
changed, so that their problems will not be attributed erroneously to
authors of previous versions.

Some devices are designed to deny users access to install or run
modified versions of the software inside them, although the manufacturer
can do so. This is fundamentally incompatible with the aim of
protecting users' freedom to change the software. The systematic
pattern of such abuse occurs in the area of products for individuals to
use, which is precisely where it is most unacceptable. Therefore, we
have designed this version of the GPL to prohibit the practice for those
products. If such problems arise substantially in other domains, we
stand
ready to extend this provision to those domains in future versions
of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents.
States should not allow patents to restrict development and use of
software on general-purpose computers, but in those that do, we wish to
avoid the special danger that patents applied to a free program could
make it effectively proprietary. To prevent this, the GPL assures that
patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and
modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of
works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this
License. Each licensee is addressed as "you". "Licensees"
and
"recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work
in a fashion requiring copyright permission, other than the making of an

exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to

produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed;

section 10
makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately
publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this
License to anyone who comes into possession of a copy. This
License will therefore apply, along with any applicable section 7
additional terms, to the whole of the work, and all its parts,
regardless of how they are packaged. This License gives no
permission to license the work in any other way, but it does not
invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display
Appropriate Legal Notices; however, if the Program has interactive
interfaces that do not display Appropriate Legal Notices, your
work need not make them do so.

A compilation of a covered work with other separate and independent
works, which are not by their nature extensions of the covered work,
and which are not combined with it such as to form a larger program,
in or on a volume of a storage or distribution
medium, is called an
"aggregate" if the compilation and its resulting copyright are not
used to limit the access or legal rights of the compilation's users
beyond what the individual works permit. Inclusion of a covered work
in an aggregate does not cause this License to apply to the other
parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms
of sections 4 and 5, provided that you also convey the
machine-readable Corresponding Source under the terms of this License,
in one of these ways:

a) Convey the object code in, or embodied in, a physical product
(including a physical distribution medium), accompanied by the
Corresponding Source fixed on a durable physical medium
customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product
(including a physical distribution medium), accompanied by a
written offer, valid for at least three years
and valid for as
long as you offer spare parts or customer support for that product
model, to give anyone who possesses the object code either (1) a
copy of the Corresponding Source for all the software in the
product that is covered by this License, on a durable physical
medium customarily used for software interchange, for a price no
more than your reasonable cost of physically performing this
conveying of source, or (2) access to copy the
Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in
the same way through the same place at no
further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source
as a System Library, need not be
included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization
keys, or other information required to install
and execute modified versions of a covered work in that User Product from

a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in
ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the
entire Program shall
be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work,

for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or authors of the material; or

e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions;

the above
requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright
holder, and you cure the violation prior to 30 days after
your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and

propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For
purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a

party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the
option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY
OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where

the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <http://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<http://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want to
do, use the GNU Lesser General
Public License instead of this License. But first, please read
<http://www.gnu.org/philosophy/why-not-lgpl.html>.
The files gnupng and gnu.eps are part of GNU Modula-2.

Copyright (C) 2005-2024 Free Software Foundation, Inc.

This file is part of GNU Modula-2.

GNU Modula-2 is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 3, or (at your option)
any later version.

GNU Modula-2 is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with GNU Modula-2; see the file COPYING. If not, write to the
Free Software Foundation, 51 Franklin Street, Fifth Floor, Boston, MA
02110-1301, USA. */
GNU LESSER GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates
the terms and conditions of version 3 of the GNU General Public
License, supplemented by the additional permissions listed below.

0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser
General Public License, and the "GNU GPL" refers to version 3 of the GNU
General Public License.

"The Library" refers to a covered work governed by this License,
other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided
by the Library, but which is not otherwise based on the Library.
Defining a subclass of a class defined by the Library is
deemed a mode
of using an interface provided by the Library.

A "Combined Work" is a work produced by combining or linking an
Application with the Library. The particular version of the Library
with which the Combined Work was made is also called the "Linked
Version".

The "Minimal Corresponding Source" for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The "Corresponding Application Code" for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

2. Conveying
Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or

b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data
structure
layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License.

b) Accompany the object code with a copy of the GNU GPL and this license

document.

4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.

b) Accompany the Combined Work with a copy of the GNU GPL and this license document.

c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.

d) Do one of the following:

0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.

1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.

e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany

the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.

b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

GCC RUNTIME LIBRARY EXCEPTION

Version 3.1, 31 March 2009

Copyright (C) 2009-2024 Free Software Foundation, Inc. <http://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies of this
license document, but changing it is not allowed.

This GCC Runtime Library Exception ("Exception") is an additional
permission under section 7 of the GNU General Public License, version
3 ("GPLv3"). It applies to a given file (the "Runtime Library") that
bears a notice placed by the copyright holder of the file stating that
the file is governed by GPLv3 along with this Exception.

When you use GCC to compile a program, GCC may combine portions of
certain GCC header files and runtime libraries with the compiled
program. The purpose of this Exception is to allow compilation of
non-GPL (including proprietary) programs to use, in this way, the
header files and runtime libraries covered by this Exception.

0. Definitions.

A file is an "Independent Module" if it either requires the Runtime
Library
 for execution after a Compilation Process, or makes use of an
interface provided by the Runtime Library, but is not otherwise based
on the Runtime Library.

"GCC" means a version of the GNU Compiler Collection, with or without
modifications, governed by version 3 (or a specified later version) of
the GNU General Public License (GPL) with the option of using any
subsequent versions published by the FSF.

"GPL-compatible Software" is software whose conditions of propagation,
modification and use would permit combination with GCC in accord with
the license of GCC.

"Target Code" refers to output from any compiler for a real or virtual
target processor architecture, in executable form or suitable for
input to an assembler, loader, linker and/or execution
phase. Notwithstanding that, Target Code does not include data in any
format that is used as a compiler intermediate representation, or used
for producing a compiler intermediate representation.

The "Compilation Process" transforms
 code entirely represented in
non-intermediate languages designed for human-written code, and/or in
Java Virtual Machine byte code, into Target Code. Thus, for example,
use of source code generators and preprocessors need not be considered
part of the Compilation Process, since the Compilation Process can be

understood as starting with the output of the generators or
preprocessors.

A Compilation Process is "Eligible" if it is done using GCC, alone or
with other GPL-compatible software, or if it is done without using any
work based on GCC. For example, using non-GPL-compatible Software to
optimize any GCC intermediate representations would not qualify as an
Eligible Compilation Process.

1. Grant of Additional Permission.

You have permission to propagate a work of Target Code formed by
combining the Runtime Library with Independent Modules, even if such
propagation would otherwise violate the terms of GPLv3, provided that
all Target Code was generated by Eligible Compilation Processes.
 You
may then convey such a combination under terms of your choice,
consistent with the licensing of the Independent Modules.

2. No Weakening of GCC Copyleft.

The availability of this Exception does not imply any general
presumption that third-party software is unaffected by the copyleft
requirements of the license of GCC.
==========
compiler_rt License
==========

The compiler_rt library is dual licensed under both the University of Illinois
"BSD-Like" license and the MIT license. As a user of this code you may choose
to use it under either license. As a contributor, you agree to allow your code
to be used under both.

Full text of the relevant licenses is included below.

==========

University of Illinois/NCSA
Open Source License

Copyright (c) 2009-2012 by the contributors listed in CREDITS.TXT

All rights reserved.

Developed by:

  LLVM Team

University of Illinois at Urbana-Champaign

http://llvm.org

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal with the Software without restriction,
including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimers.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimers in the documentation and/or other materials provided with the distribution.

* Neither the names of the LLVM Team, University of Illinois at Urbana-Champaign, nor the names of its contributors may be used to endorse or promote products derived from this Software without specific prior written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE SOFTWARE.

==========

Copyright (c) 2009-2012 by the contributors listed in CREDITS.TXT

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or
substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

==
Copyrights and Licenses for Third Party Software Distributed with LLVM:
==
The LLVM software contains code written by third parties. Such software will
have its own individual LICENSE.TXT file in the directory in which it appears.
This file will describe the copyrights, license, and restrictions which apply
to that code.

The disclaimer of
 warranty in the University of Illinois Open Source License
applies to all code in the LLVM Distribution, and nothing in any of the
other licenses gives permission to use the names of the LLVM Team or the
University of Illinois to endorse or promote products derived from this
Software.

The following pieces of software have additional or alternate copyrights,
licenses, and/or restrictions:

Program Directory
------- ---------
mach_override lib/interception/mach_override
UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

Unicode Data Files include all data files under the directories
http://www.unicode.org/Public/, http://www.unicode.org/reports/, and
http://www.unicode.org/cldr/data/. Unicode Data Files do not include PDF
online code charts under the directory http://www.unicode.org/Public/.
Software includes any source code published in the Unicode Standard or under
the directories http://www.unicode.org/Public/,
http://www.unicode.org/reports/, and http://www.unicode.org/cldr/data/.

NOTICE TO USER: Carefully read the following legal agreement. BY
DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S DATA FILES
("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"), YOU UNEQUIVOCALLY ACCEPT, AND
AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF
YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA
FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright 1991-2013 Unicode,
Inc. All rights reserved. Distributed under
the Terms of Use in http://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining a
copy of the Unicode data files and any associated documentation (the "Data
Files") or Unicode software and any associated documentation (the "Software")
to deal in the Data Files or Software without restriction, including without
limitation the rights to use, copy, modify, merge, publish, distribute, and/or
sell copies of the Data Files or Software, and to permit persons to whom the
Data Files or Software are furnished to do so, provided that (a) the above
copyright notice(s) and this permission notice appear with all copies of the
Data Files or Software, (b) both the above copyright notice(s) and this
permission notice appear in associated documentation, and (c) there is clear
notice in each modified Data File or in the Software as well as in the
documentation associated with the Data File(s) or Software
that the data or
software has been modified.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall
not be used in advertising or otherwise to promote the sale, use or other
dealings in these Data Files or Software without prior written authorization
of the copyright holder.
Copyright (c) 2019 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.53 github.com/aws/aws-sdk-go-v2/service/internal/accept-encoding 1.13.1

1.53.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry

```
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
```

```
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
       uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
```

```
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
```

```
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
```

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning

Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
{
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
```

```
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
```

```
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
```

```
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
```

```
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
     },
     "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
```

```
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

        }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
            "type": "structure",
            "members": {
                "Username": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                    }
                },
                "InstanceId": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                    }
                },
                "IdentityProvider": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                    "traits": {
                        "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                    }
                },
                "InstanceUserArn": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                    "traits": {
                        "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                    }
                },
                "Domain": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                    }
                }
            },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },

   "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
```

```
            },
            "Operation": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
               }
            },
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
         "type": "union",
         "members": {
            "ActiveDirectoryIdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Settings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
```

```
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
```

```
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },

      "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
          },
          "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
           "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

           "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
```

```
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
```

```
    {
      "fn": "isSet",
      "argv": [
        {
          "ref": "Endpoint"
        }
      ]
    }
  ],
 "rules": [
    {
      "conditions": [
        {
          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseFIPS"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [
        {

          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseDualStack"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [],
      "endpoint": {
        "url": {
          "ref": "Endpoint"
        },
```

```
        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "aws.partition",

                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseFIPS"
                                        },

true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
```

```
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

            ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
```

```
                                    "endpoint": {
                                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

    ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [

 {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "fn": "getAttr",
                                                "argv": [

                    {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsFIPS"
```

```
                                ]
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
```

```
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

            }
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

                        ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                        },
                        "type": "endpoint"
                    }
```

```
                    ],
                    "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ]
          },
          "smithy.rules#endpointTests": {
            "testCases": [
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "us-east-1",

        "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
```

```
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
```

```
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
```

```
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
```

```
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack":
false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
              "expect": {
                "endpoint": {
                  "url": "https://example.com"
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",
```

```
                    "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
        "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
```

```
            }
        },
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>"
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
```

```
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
              "value": "PROVISIONED",
              "documentation": ""
            },
            {
              "name": "DELETING",
              "value": "DELETING",
```

```
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
    "type": "structure",
     "members": {
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
            }
        },
        "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
            "smithy.api#required": {}
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
 <ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
 </li>\n        </ul>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
 {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
```

```
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
```

```
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{ResourceArn}"
           },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
```

```
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
```

```
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

        }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
 "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
          "type": "structure",
          "members": {
```

```
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

          "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                  "smithy.api#required": {}
               }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
```

```
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
              }
```

```
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
```

```
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
                "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
      "members": {
        "RdsSalSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
```

```
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                    "smithy.api#required": {}
                }
            }
        },

        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
```

```
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
             "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
          }
        },
        "Product": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
          }
        },
        "ProductUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
          }
         }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
```

```
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
         "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
```

```
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
                }
            },
            "UpdateSettings":
 {
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
        <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n                <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n        </ul>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
            "AddSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
                    "smithy.api#required":
```

```
{}
                }
            },
            "RemoveSubnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
```

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}
```

```
type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
```

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
```

```
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
```

```
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
```

```
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
```

```
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string
```

```
 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
```

```
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
```

```
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType
```

```
// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
```

```
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
```

```
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
```

```
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
```

```
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
```

```
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
```

```
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
```

```
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
```

ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

```
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
```

```
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
```

```
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
```

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },

    {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
             }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
```

```
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
```

```
        "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
               "traits": {
                  "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
               }
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
         "type": "structure",
         "members": {
            "AmiId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
               }
            },
            "InstanceID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
               }
            },
            "InstanceType": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The instance type of the resource.</p>"
               }
            },
            "AccountID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager Linux Subscriptions",
                 "arnNamespace": "license-manager-linux-subscriptions",
                "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
```

```
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
```

```
      "Endpoint": {
        "builtIn": "SDK::Endpoint",
        "required": false,
        "documentation": "Override the endpoint used to send this request",
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }

],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
```

```
                        ]

}
                    ],
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                    "type": "error"
                },
                {
                    "conditions": [],
                    "endpoint": {
                        "url": {
                            "ref": "Endpoint"
                        },
                        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"

        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "isSet",
                        "argv": [
                            {
                                "ref": "Region"
                            }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {

    "fn": "aws.partition",
                                "argv": [
                                    {
                                        "ref": "Region"
```

```
                }
            ],
            "assign": "PartitionResult"
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {

                    "ref": "UseFIPS"
                        },
                        true
                    ]
                },
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }

],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"

},
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
```

```
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [

                                                     {
                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],

        "rules": [
                                                {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],

                                "type": "tree"
                                        }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
```

```
                                {

                "conditions": [
                                        {
                                           "fn": "booleanEquals",
                                           "argv": [
                                              {
                                                 "ref": "UseFIPS"
                                              },
                                              true
                                           ]
                                        }
                                     ],
                                     "rules": [
                                        {
                                           "conditions": [
                                              {

                              "fn": "booleanEquals",
                                                 "argv": [
                                                    {
                                                       "fn": "getAttr",
                                                       "argv": [
                                                          {
                                                             "ref": "PartitionResult"
                                                          },
                                                          "supportsFIPS"
                                                       ]
                                                    },
                                                    true

                                               ]
                                                 }
                                              ],
                                              "rules": [
                                                 {
                                                    "conditions": [],
                                                    "rules": [
                                                       {
                                                          "conditions": [],
                                                          "endpoint": {
                                                             "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                             "headers": {}
                                                          },
                                                          "type": "endpoint"
```

```
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "FIPS is enabled
but this partition does not support FIPS",
            "type": "error"
        }
    ],
    "type": "tree"
},
{
    "conditions": [
        {
            "fn": "booleanEquals",
            "argv": [
                {
                    "ref": "UseDualStack"
                },
                true

]
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                            "fn": "getAttr",
                            "argv": [
                                {

                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                            ]
                        }
                    ]
                }
```

```
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],
                                            "type": "tree"

                        }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
```

```
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

  }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
```

```
                }
              },
              {
                "documentation": "Missing region",

              "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
              "name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
```

```
                "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
```

```
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
                <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 16384
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
```

```
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptions"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
```

```
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
```

```
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
```

```
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
```

```
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

            "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
             },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
```

```
                "min": 1,
                "max": 100
            }
        }
    },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
        },
        "Type": {
            "target": "smithy.api#String",
            "traits": {

 "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
        },
        "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
```

```
                "value": "INVALID",
                "documentation": "INVALID status"
              },
              {
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
```

```
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
```

```
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
      "type": "structure",
```

```
    "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
 {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
```

```
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
```

```
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
```

```
            "smithy.api#error": "client"
          }
        }
      }
    }
}
```

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step

spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.54 aws-sdk-go-v2-internal-endpoints 2.7.6

1.54.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint

```
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
```

```
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement
```

```
// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string
```

```
// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
```

```
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return
```

```
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
```

```
        uses: actions/setup-python@v2
        with:
          python-version: ${{ matrix.python-version }}
      # ScanCode
      - name: Self-configure scancode
        working-directory: ./scancode-toolkit
        run: ./scancode --help
      - name: Run Scan code on target
        run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
      - name: Run Scan code on pr ref
        run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
      # compare
      - name: License test
        run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
```

GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry

InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd

```
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:       region,
 ServiceID:    ServiceID,
 OperationName: "ListReceivedLicenses",
}
}
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
```

```
provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
```

```
            "smithy.api#enum": [
               {
                  "name": "SELF_MANAGED",
                  "value": "SELF_MANAGED",
                  "documentation": "SELF_MANAGED type of Active Directory"
               },
               {
                  "name": "AWS_MANAGED",
                  "value": "AWS_MANAGED",
                  "documentation": "AWS_MANAGED type of Active Directory"
               }
            ]
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                  "smithy.api#required": {}
               }
            },
             "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Domain": {
               "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
           }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
```

```
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
            "type": "operation",
            "input": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
            },
            "output": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
            },
            "errors": [
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
                },

               {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
                }
            ],
            "traits": {
                "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS)
license server.</p>",
                "smithy.api#http": {
                    "code": 200,
                    "method": "POST",
                    "uri": "/license-server/CreateLicenseServerEndpoint"
                },
                "smithy.api#idempotent": {}
            }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
            "type": "structure",
            "members": {
                "IdentityProviderArn": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
             "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

 }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/DeleteLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
              "smithy.api#required": {}
            }
          },
           "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
```

```
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/DeregisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
             "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
        "smithy.api#idempotent": {}
```

```
    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
```

```
        "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
```

```
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
         "type": "union",
         "members": {
            "ActiveDirectoryIdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Settings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
    "type": "list",
    "member": {

      "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
    "type": "structure",
```

```
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                    "smithy.api#required": {}
                }
            },
            "Products": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
                 "traits": {
                    "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                    "smithy.api#required": {}
                }
            },
            "LastStatusCheckDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date of the last status check.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
```

```
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },

     "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
      }
    },
```

```
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

       "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
```

```
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
```

```
      }
    ],
    "rules": [
      {
        "conditions": [
          {
            "fn": "booleanEquals",
            "argv": [
              {
                "ref": "UseFIPS"
              },
              true
            ]
          }
        ],
        "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
        "type": "error"
      },
      {
        "conditions": [
          {

            "fn": "booleanEquals",
            "argv": [
              {
                "ref": "UseDualStack"
              },
              true
            ]
          }
        ],
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
        "type": "error"
      },
      {
        "conditions": [],
        "endpoint": {
          "url": {
            "ref": "Endpoint"
          },

"properties": {},
            "headers": {}
          },
          "type": "endpoint"
        }
      ],
      "type": "tree"
```

```
    },
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Region"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "aws.partition",

              "argv": [
                {
                  "ref": "Region"
                }
              ],
              "assign": "PartitionResult"
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
```

true

```
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {
"fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          }
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsDualStack"
                            ]
                          }
                ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                          "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
```

```
                }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
                                "argv": [

    {
                                        "ref": "PartitionResult"
                                    },
                                    "supportsFIPS"
                                ]
                            },
                            true
                        ]
                    }
                ],
                "rules": [
```

```
                                    {
                                      "conditions": [],
                                      "endpoint": {

                "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                      },
                                      "type": "endpoint"
                                    }
                                  ],
                                  "type": "tree"
                                },
                                {
                                  "conditions": [],
                                  "error": "FIPS is enabled but this partition does not support FIPS",
                                  "type": "error"

}
                              ],
                              "type": "tree"
                            },
                            {
                              "conditions": [
                                {
                                  "fn": "booleanEquals",
                                  "argv": [
                                    {
                                      "ref": "UseDualStack"
                                    },
                                    true
                                  ]
                                }
                              ],
                              "rules": [
                                {

        "conditions": [
                                    {
                                      "fn": "booleanEquals",
                                      "argv": [
                                        true,
                                        {
                                          "fn": "getAttr",
                                          "argv": [
                                            {
                                              "ref": "PartitionResult"
                                            },
```

```
                "supportsDualStack"
            ]

        }
            ]
        }
      ],
      "rules": [
        {
          "conditions": [],
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
            "properties": {},
            "headers": {}
          },
          "type": "endpoint"
        }

    ],
      "type": "tree"
    },
    {
      "conditions": [],
      "error": "DualStack is enabled but this partition does not support DualStack",
      "type": "error"
    }
  ],
  "type": "tree"
},
{
  "conditions": [],
  "endpoint": {
    "url": "https://license-manager-user-subscriptions.{Region}.{PartitionResult#dnsSuffix}",

  "properties": {},
      "headers": {}
    },
    "type": "endpoint"
  }
 ],
 "type": "tree"
}
],
"type": "tree"
},
{
```

```
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ]
          },
          "smithy.rules#endpointTests": {
            "testCases": [
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "us-east-1",

      "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
```

```
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
```

```
{
                    "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": false,
                 "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": true,
                "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
         "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
```

```
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
```

```
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true,
        "Endpoint": "https://example.com"
       }
    },
    {
      "documentation": "Missing region",
      "expect": {
        "error": "Invalid Configuration: Missing Region"
      }
    }
  ],
  "version": "1.0"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "smithy.api#String",
              "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
              }
            },
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>"
```

```
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "PROVISIONING",
                    "value": "PROVISIONING",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONING_FAILED",

                  "value": "PROVISIONING_FAILED",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONED",
                    "value": "PROVISIONED",
                    "documentation": ""
                },
                {
                    "name": "DELETING",
                    "value": "DELETING",
                    "documentation": ""
                },
                {
                    "name": "DELETION_FAILED",
                    "value": "DELETION_FAILED",
                    "documentation": ""
```

```
            },
            {
              "name": "DELETED",
              "value": "DELETED",
              "documentation": ""
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "HEALTHY",
              "value": "HEALTHY",
              "documentation": ""
            },
            {
              "name": "UNHEALTHY",
              "value": "UNHEALTHY",
              "documentation": ""
            },
            {
              "name": "NOT_APPLICABLE",
              "value": "NOT_APPLICABLE",
              "documentation": ""
            }
          ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>",
              "smithy.api#required": {}
            }
          },
          "ServerSettings": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings for your \n\t\t\tserver.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based subscriptions.</p>",
          "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/ListIdentityProviders"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "IdentityProviderSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Product</p>\n          </li>\n          <li>\n            <p>DirectoryId</p>\n
</li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "NextToken":
{
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
</li>\n        </ul>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
      "type": "structure",
      "members": {
        "InstanceSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output":
{}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
             "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
```

\n\tfrom a previously truncated response. "
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": " An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects. "
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {

   "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
```

```
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
```

```
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

   "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
      "smithy.api#http": {
        "method": "GET",
        "uri": "/tags/{ResourceArn}"
       },
      "smithy.api#readonly": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
    "type": "structure",
    "members": {
      "ResourceArn": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
        "traits": {
          "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
          "smithy.api#httpLabel": {},
          "smithy.api#required": {}
        }
      }
    },
    "traits": {
```

```
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
           "traits": {
             "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/ListUserAssociations"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
```

```
        }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
 "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                "smithy.api#required": {}
              }
```

```
        },
        "Product": {

      "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a product for this user.</p>",
            "smithy.api#required": {}
          }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
          }
        },
        "SubscriptionStartDate": {
          "target": "smithy.api#String",
          "traits": {
```

```
  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
                }
            },
            "SubscriptionEndDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The end date of a subscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
            "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
              }
            },

         "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}
}
},
"Settings": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
"traits": {
"smithy.api#documentation": " The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
"traits": {
"smithy.api#documentation": " The tags that apply to the identity provider's registration. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the results of an identity provider
operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
"type": "string",
"traits": {
"smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
}
},

```
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
        "smithy.api#error": "client",
        "smithy.api#httpError": 404
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {
```

```
        "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
```

```
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
                    "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                    "smithy.api#required": {}
                }
            }
        },

        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
   <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
```

```
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                "smithy.api#required": {}

             }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
          "type": "structure",
          "members": {
            "ProductUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
        "smithy.api#http":
 {
          "code": 200,
          "method": "POST",
          "uri": "/user/StopProductSubscription"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
              "method": "DELETE",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "TagKeys": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
          },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
            }
          },
```

```
        "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
```

```
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
      }
    }
    DeleteLicense
     Initialize stack step
      spanInitializeStart
      InterceptExecution
      RegisterServiceMetadata
      legacyEndpointContextSetter
      SetLogger
      OperationInputValidation
      spanInitializeEnd
     Serialize stack step
      spanBuildRequestStart
      setOperationInput
      ResolveEndpoint
      InterceptBeforeSerialization
      OperationSerializer
      InterceptAfterSerialization
     Build stack step
```

```
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)
```

```
// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License
```

```
 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}
```

```
func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
```

```
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
```

```
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
```

```
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
```

```
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
```

```
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)
```

```
// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
```

```
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
```

```
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
```

```
    // This member is required.
    DigitalSignatureMethod types.DigitalSignatureMethod

    // License entitlements. Partial checkouts are not supported.
    //
    // This member is required.
    Entitlements []types.EntitlementData

    // Amazon Resource Name (ARN) of the license. The license must use the borrow
    // consumption configuration.
    //
    // This member is required.
    LicenseArn *string

    // Information about constraints.
    CheckoutMetadata []types.Metadata

    // Node ID.
    NodeId *string

    noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

    // Information about constraints.
    CheckoutMetadata []types.Metadata

    // Allowed license entitlements.
    EntitlementsAllowed
    []types.EntitlementData

    // Date and time at which the license checkout expires.
    Expiration *string

    // Date and time at which the license checkout is issued.
    IssuedAt *string

    // Amazon Resource Name (ARN) of the license.
    LicenseArn *string

    // License consumption token.
    LicenseConsumptionToken *string

    // Node ID.
    NodeId *string

    // Signed token.
```

```
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
```

```
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
```

```
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
```

```
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
```

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
```

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
```

```
nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
```

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
            }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
```

```
"list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
"<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
```

```
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                 "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
            "AmiId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
                }
            },
            "InstanceID": {
                "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
        },
        "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
```

```
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
          "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
          },
          "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

     "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
```

```
            "required": false,
            "documentation": "The AWS region used to dispatch the request.",
            "type": "String"
          },
          "UseDualStack": {
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
             "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

```
                        true
                    ]
                }

        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
```

```
{
  "conditions": [
    {
      "fn": "isSet",
      "argv": [
        {
          "ref": "Region"
        }
      ]
    }
  ],
  "rules": [
    {
      "conditions": [
        {

"fn": "aws.partition",
          "argv": [
            {
              "ref": "Region"
            }
          ],
          "assign": "PartitionResult"
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {

            "ref": "UseFIPS"
                },
                true
              ]
            },
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }
```

```
],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"

            },
                                "supportsFIPS"
                            ]
                          }
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [

                             {
                                "ref": "PartitionResult"
                              },
                              "supportsDualStack"
                            ]
                          }
                        ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [],

    "rules": [
                          {
                            "conditions": [],
                            "endpoint": {
                              "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                              "properties": {},
```

```
                "headers": {}
              },
              "type": "endpoint"
            }
          ],

      "type": "tree"
          }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "error": "FIPS and DualStack are enabled, but this partition does not support one or both",
        "type": "error"
      }
    ],
    "type": "tree"
  },
  {

"conditions": [
      {
        "fn": "booleanEquals",
        "argv": [
          {
            "ref": "UseFIPS"
          },
          true
        ]
      }
    ],
    "rules": [
      {
        "conditions": [
          {

"fn": "booleanEquals",
            "argv": [
              {
                "fn": "getAttr",
                "argv": [
                  {
                    "ref": "PartitionResult"
                  },
                  "supportsFIPS"
                ]
```

```
                    },
                    true

                ]
            }
        ],
        "rules": [
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "FIPS is enabled
but this partition does not support FIPS",
        "type": "error"
    }
  ],
  "type": "tree"
},
{
  "conditions": [
    {
      "fn": "booleanEquals",
      "argv": [
        {
          "ref": "UseDualStack"
        },
        true

    ]
    }
```

```
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {

                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "rules": [

        {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"

                    }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
```

```
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ],
        "type": "tree"
    }
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {

      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

    },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
             },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": false
```

```
      }
    },
    {

  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }

     },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
          }
        },
        "params": {
          "Region": "us-isob-east-1",
          "UseFIPS": true,
          "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },

    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
```

```
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {

      "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "Missing region",

            "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
      }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled LinuxSubscriptionsDiscovery"
        },
        {
          "name": "Disabled",
          "value": "Disabled",
          "documentation": "Disabled LinuxSubscriptionsDiscovery"
        }
```

```
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
            "SourceRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "OrganizationIntegration": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
                "traits": {
                    "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
                <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
         "type": "structure",
         "members": {
            "Instances": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
               "traits": {
                  "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n         <p>The valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n                  <code>contains</code>\n               </p>\n            </li>\n            <li>\n               <p>\n                  <code>equals</code>\n               </p>\n            </li>\n            <li>\n               <p>\n                  <code>Notequal</code>\n               </p>\n            </li>\n         </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
```

```
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 16384
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
```

```
                }
            }
        },
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
            }
        }
    },

    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
    "type": "structure",
    "members": {
        "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
                "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
            }
        },
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
    },
    "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
                }
            }
        },
```

```
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {

"name": "Disabled",
          "value": "Disabled",
          "documentation": "Disabled OrganizationIntegration"
        }
      ]
    }
  },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/RegisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
```

```
            {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
            },
            {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String",
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            }
        }
     },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
```

```
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n       Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n       Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
"list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
```

```
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
               "method": "DELETE",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
         "type": "structure",

   "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "tagKeys": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input":
 {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {

 "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/UpdateServiceSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
            "smithy.api#required":
{}
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home Region.</p>"
              }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

      },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
```

```
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
               "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
         }
      }
   }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of,

publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and

wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the

Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter

SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step

spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit

1.55 util-linux 2.40.4-r1

1.55.1 Available under license :

NR START END SECTORS SIZE NAME UUID
1 32 7679 7648 3.7M 8f8378c0-01
2 7680 16383 8704 4.3M 8f8378c0-02
5 7936 12799 4864 2.4M
6 12544 16127 3584 1.8M

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for
software and other kinds of works.

The licenses for most software and other practical works are designed
to take away your freedom to share and change the works. By contrast,
the GNU General Public License is intended to guarantee your freedom to
share and change all versions of a program--to make sure it remains free
software for all its users. We, the Free Software Foundation, use the
GNU General Public License for most of our software; it applies also to
any other work released this way by its authors. You can apply it to
your programs, too.

When we speak of free software, we are referring to
freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
them if you wish), that you receive source code or can get it if you
want it, that you can change the software or use pieces of it in new
free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you
these rights or asking you to surrender the rights. Therefore, you have
certain responsibilities if you distribute copies of the software, or if
you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must pass on to the recipients the same
freedoms that you received. You must make sure that they, too, receive

or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees"

and
"recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy,
is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The
"System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that

Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of

your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section

7. This requirement modifies the requirement in section 4 to
"keep intact all notices".

c) You must license the entire work, as a whole, under this
License to anyone who comes into possession of a copy. This
License will therefore apply, along with any applicable section 7
additional terms, to the whole of the work, and all its parts,
regardless of how they are packaged. This License gives no
permission to license the work in any other way, but it does not
invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display
Appropriate Legal Notices; however, if the Program has interactive
interfaces that do not display Appropriate Legal Notices, your
work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution
medium, is called an
"aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product
(including a physical distribution medium), accompanied by the
Corresponding Source fixed on a durable physical medium
customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product
(including a physical distribution medium), accompanied by a
written offer, valid for at least three years
and valid for as
long as you offer spare parts or customer support for that product
model, to give anyone who possesses the object code either (1) a
copy of the Corresponding Source for all the software in the
product that is covered by this License, on a durable physical

medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option

remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty
or limiting liability differently from the
terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or authors of the material; or

e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating

where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For
purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting

any implied license or other defenses to infringement that may
otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot convey a
covered work so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you may
not convey it at all. For example, if you agree to terms that obligate you
to collect a royalty for further conveying from those to whom you convey
the Program, the only way you could satisfy both those terms and this
License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public
License.

Notwithstanding any other provision of this License, you have
permission to link or combine any covered work with a work licensed
under version 3 of the GNU Affero General Public License into a single
combined work, and to convey the resulting work. The terms of this
License will continue to apply to the part which is the covered work,
but the special requirements of the GNU Affero General Public License,
section 13, concerning interaction through a network will apply to the
combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of
the GNU General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the
Program specifies that a certain numbered version of the GNU General
Public License "or any later version" applies to it, you
have the
option of following the terms and conditions either of that numbered
version or of any later version published by the Free Software
Foundation. If the Program does not specify a version number of the
GNU General Public License, you may choose any version ever published
by the Free Software Foundation.

If the Program specifies that a proxy can decide which future
versions of the GNU General Public License can be used, that proxy's
public statement of acceptance of a version permanently authorizes you
to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY
OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
state the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where
the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <https://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<https://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want
to do, use the GNU Lesser General
Public License instead of this License. But first, please read
<https://www.gnu.org/licenses/why-not-lgpl.html>.

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice (including the next
paragraph) shall be included in all copies or substantial portions of the
Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE
 OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice, and the entire permission notice in its entirety,
  including the disclaimer of warranties.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote
  products derived from this software without specific prior
  written permission.

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED
WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF
WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL
 DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT
OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE
USE OF THIS SOFTWARE, EVEN IF NOT ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.
Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later
version.

The complete text of the license is available in the
../Documentation/licenses/COPYING.LGPL-2.1-or-later file.
/*
* Copyright (c) 1989 The Regents of the University of California.
* All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the above copyright
*   notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following disclaimer in the
*   documentation and/or other materials provided with the distribution.
* 3. All advertising materials mentioning features or use of this software
*   must display the following acknowledgement:
* This product includes software developed by the University of
* California, Berkeley and its contributors.
* 4. Neither the name of the University nor the names of its contributors
*   may be used to endorse or promote products derived from this software
*
 without specific prior written permission.
*
* THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
* SUCH DAMAGE.

*/
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
  list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
  this list of conditions and the following disclaimer in the documentation
  and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 HOWEVER
CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
                GNU GENERAL PUBLIC LICENSE
                  Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

                      Preamble

 The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it to
your programs, too.

 When we speak of free software, we are referring to freedom, not
price.
  Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it

in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not

covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those

sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and

of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE,
THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR
THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU
General Public License as published by
the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this
is what you want to do, use the GNU Lesser General
Public License instead of this License.

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is

modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation will not be affected by problems that might be
introduced by others.

Finally, software
patents pose a constant threat to the existence of
any free program. We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder. Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License. This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License. We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

When a program is linked with a library, whether statically or using
a shared library, the combination of the two is legally speaking a
combined work, a derivative of the original library. The ordinary
General Public License therefore permits
such linking only if the
entire combination fits its criteria of freedom. The Lesser General
Public License permits more lax criteria for linking other code with
the library.

We call this license the "Lesser" General Public License because it
does Less to protect the user's freedom than the ordinary General
Public License. It also provides other free software developers Less
of an advantage over competing non-free programs. These disadvantages
are the reason we use the ordinary General Public License for many
libraries. However, the Lesser license provides advantages in certain
special circumstances.

For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it becomes
a de-facto standard. To achieve this, non-free programs must be
allowed to use the library. A more frequent case is that a free
library does the same job as widely used non-free libraries. In this
case, there is little to gain by limiting
the free library to free
software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free
programs enables a greater number of people to use a large body of

free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order
to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into
another language. (Hereinafter, translation is
included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from

such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If

identifiable sections of that work are not derived from the Library, and can be
reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary
GNU General Public
License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding
machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the

source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the

copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse
you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system
which is
implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish
revised and/or new
versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision
will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE,
BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that

everyone can redistribute and change. You can do so by permitting
redistribution under these terms (or, alternatively, under the terms of the
ordinary General Public License).

 To apply these terms, attach the following notices to the library. It is
safest to attach them to the start of each source file to most effectively
convey
 the exclusion of warranty; and each file should have at least the
"copyright" line and a pointer to where the full notice is found.

  <one line to give the library's name and a brief idea of what it does.>
  Copyright (C) <year> <name of author>

  This library is free software; you can redistribute it and/or
  modify it under the terms of the GNU Lesser General Public
  License as published by the Free Software Foundation; either
  version 2.1 of the License, or (at your option) any later version.

  This library is distributed in the hope that it will be useful,
  but WITHOUT ANY WARRANTY; without even the implied warranty of
  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
  Lesser General Public License for more details.

  You should have received a copy of the GNU Lesser General Public
  License along with this library; if not, write to the Free Software
  Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301
 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the
 library `Frob' (a library for tweaking knobs) written by James Random Hacker.

 <signature of Ty Coon>, 1 April 1990
 Ty Coon, President of Vice

That's all there is to it!
This library is free software; you can redistribute it and/or
modify it under the terms of the Modified BSD License.

The complete text of the license is available in the
../Documentation/licenses/COPYING.BSD-3-Clause file.
BSD 2-Clause License

Copyright (c) 2023, Thorsten Kukuk

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
  list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
  this list of conditions and the following disclaimer in the documentation
  and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES;
 LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER
CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later
version.

The complete text of the license is available in the
../Documentation/licenses/COPYING.LGPL-2.1-or-later

1.56 aws-sdk-go-v2-service-dynamodb 1.50.1

1.56.1 Available under license :

GetLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput

```
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement
```

```
// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string
```

```
// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
```

```
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
```

ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop

Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

```
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
            "traits": {
              "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
            }
          },
          "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
```

```
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
```

```
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
                  "smithy.api#required": {}
               }
            },
             "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
               }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
```

```
            },
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoint": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
              "traits": {
                "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
```

```
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}

      }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Directory": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
```

```
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary":
{
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
         "type": "structure",
         "members": {
            "Subnets": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
               "traits": {
                  "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                  "smithy.api#length": {
                     "min": 1
                  },
```

```
    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
```

```
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
```

```
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
          }
        },
        "FailureMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
    "type": "structure",
    "members": {
        "Username": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

"IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
```

```
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
               }
            },
            "AssociationDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
               }
            },
            "DisassociationDate": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
         "type": "list",
```

```
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
```

```
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

          "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
```

```
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
             ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [
                  {

                    "fn": "booleanEquals",
                    "argv": [
                      {
```

```
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "aws.partition",

                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

true

```
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
```

"fn": "booleanEquals",

```
                            "argv": [
                              true,
                              {
                                "fn": "getAttr",
                                "argv": [
                                  {
                                    "ref": "PartitionResult"
                                  },
                                  "supportsFIPS"
                                ]
                              }
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              true,
```

```
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }

    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [

 {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
```

```
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [

        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {

    "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {

        "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]

          }
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }

            ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
```

```
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                            "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect":
{
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
```

```
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

        "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint":
{
                  "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
```

```
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
```

```
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
 false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
 disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
```

```
                    }
                },
                {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                        "Region": "us-east-1",
                        "UseFIPS": false,
                        "UseDualStack": true,
                        "Endpoint": "https://example.com"
                    }
                },
                {
                    "documentation": "Missing region",
                    "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
        "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
                }
            },
            "LicenseServers": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
                "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
                }
            },
            "CreationTime": {
                "target": "smithy.api#Timestamp",
                "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                "name": "PROVISIONING",
                "value": "PROVISIONING",
```

```
            "documentation": ""
          },
          {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
          },
          {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
```

```
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
</li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
              }
            },
             "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
```

```
            }
          },
          "NextToken":
{
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/license-server/ListLicenseServerEndpoints"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "LicenseServerEndpoints"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
      "type": "structure",
      "members": {
```

```
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                  "smithy.api#range": {
                     "min": 1,
                     "max": 100
                  }
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

     "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
          },
          "errors": [
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListUserAssociations"
             },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "InstanceUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
```

```
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

         }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
```

```
 "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

          "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
              "target": "smithy.api#String",
              "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
              }
            },
            "SubscriptionEndDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
          "type": "structure",
          "members": {
            "RdsSalCredentialsProvider": {
```

```
        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
           }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
```

```
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
```

```
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",

        "traits": {
              "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
              "smithy.api#length": {
                "min": 1
              }
            }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
              "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
          "type": "structure",
          "members": {
            "Endpoint": {

           "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
          "type": "union",
          "members": {
            "RdsSalSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },
```

```
        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
             "traits": {
               "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/StopProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "ProductUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
```

```
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
```

```
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
    "type": "structure",
    "members": {},
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#Tags": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    },
    "traits": {
        "smithy.api#length": {
            "min": 0,
            "max": 50
        },
        "smithy.api#sensitive": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
```

```
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                     "smithy.api#required": {}
                }
```

```
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

        },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
```

```
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
```

```
        }
      }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
```

```
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
```

SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
"context"
"fmt"
awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
"github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
"github.com/aws/smithy-go/middleware"
smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))

```
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
```

```
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
```

```
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
```

```
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
```

```
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType
```

```
//
The ID of the workspace to remove the Grafana Enterprise license from.
//
// This member is required.
WorkspaceId *string

noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

// A structure containing information about the workspace.
//
// This member is required.
Workspace *types.WorkspaceDescription

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
```

```
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
```

```
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
```

```
 return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
```

```
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
```

```
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string
```

```
 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go

Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod
```

```
// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
```

```
//
// Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
// trials.
//
// This member is required.
LicenseType types.LicenseType

// The ID of the workspace to associate the license with.
//
// This member is required.
WorkspaceId *string

// A token from Grafana Labs that ties your Amazon Web Services account with a
// Grafana Labs account. For more information, see [Link your account with Grafana Labs].
//
// [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
GrafanaToken *string

noSmithyDocumentSerde
}

type AssociateLicenseOutput
struct {

// A structure containing data about the workspace.
//
// This member is required.
Workspace *types.WorkspaceDescription

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
```

```
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
```

```
c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
```

```
 OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
```

InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
```

```
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
```

```
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own
License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider
resource to deregister.</p>",
            "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/GetRegisteredSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
```

```
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
          }
        },
        "StatusMessage": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
          "traits": {
            "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
          }
        },
        "HomeRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
          }
        },
        "InstanceID": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
          }
        },
        "InstanceType": {
```

```
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
```

```
            },
            "SubscriptionName": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
               }
            },
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

     "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
      "type": "service",
      "version": "2018-05-10",
      "operations": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager Linux Subscriptions",
                 "arnNamespace": "license-manager-linux-subscriptions",
                "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
                "name": "license-manager-linux-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
                "additionalAllowedHeaders": [
                    "*",
                    "content-type",
                    "x-amz-content-sha256",
                    "x-amz-user-agent",
                    "x-amzn-platform-id",
                    "x-amzn-trace-id"
                ],
                "additionalExposedHeaders": [
                    "x-amzn-errortype",
                    "x-amzn-requestid",
                    "x-amzn-trace-id"
                ]
            },
            "smithy.api#documentation": "<p>With License Manager,
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager Linux Subscriptions",
            "smithy.rules#endpointRuleSet": {
                "version": "1.0",
                "parameters": {
                    "Region": {
                        "builtIn": "AWS::Region",
                        "required": false,
                        "documentation": "The AWS region used to dispatch the request.",
                        "type": "String"
                    },
                    "UseDualStack": {
```

```
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
             "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
```

```
        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                            ],
                            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                            "type": "error"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": {
                                    "ref": "Endpoint"
                                },
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"

                }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "isSet",
```

```
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

        "fn": "aws.partition",
                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {

                       "ref": "UseFIPS"
                          },
                          true
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }

    ],
                    "rules": [
                      {
                        "conditions": [
```

```
                                        {
                                          "fn": "booleanEquals",
                                          "argv": [
                                            true,
                                            {
                                              "fn": "getAttr",
                                              "argv": [
                                                {
                                                  "ref": "PartitionResult"

                    },
                                                "supportsFIPS"
                                              ]
                                            }
                                          ]
                                        },
                                        {
                                          "fn": "booleanEquals",
                                          "argv": [
                                            true,
                                            {
                                              "fn": "getAttr",
                                              "argv": [

                                               {
                                                  "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
                                              ]
                                            }
                                          ]
                                        }
                                      ],
                                      "rules": [
                                        {
                                          "conditions": [],

        "rules": [
                                            {
                                              "conditions": [],
                                              "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                              },
                                              "type": "endpoint"
                                            }
```

```
                                ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {

                "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsFIPS"
                                            ]
                                        },
                                        true
```

```
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS is enabled
 but this partition does not support FIPS",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true

                ]
                        }
                    ],
                    "rules": [
                        {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {

                          "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [

        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                          },
                          "type": "endpoint"
                        }
                      ],
                      "type": "tree"

                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
              }
            ],
            "type": "tree"
          },
```

```
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
```

```
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {

      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

    },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
```

```
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
       },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
```

```
"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-gov-east-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                  }

               },
                "params": {
                  "Region": "us-gov-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-gov-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
              },
              {

            "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
                  }
                },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
```

```
                "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },

            {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
    disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                  },
                  "params": {
```

```
      "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
               }
            },
            {
               "documentation": "For custom endpoint with fips disabled and dualstack enabled",
               "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
               },
               "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
               }
            },
            {
               "documentation": "Missing region",

            "expect": {
                  "error": "Invalid Configuration: Missing Region"
               }
            }
         ],
         "version": "1.0"
      }
   }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
         },
         {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
         }
      ]
   }
},
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
```

```
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "Instances"
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
         "type": "structure",
         "members": {
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n           <li>\n              <p>\n                 <code>AccountID</code>\n
</p>\n           </li>\n           <li>\n              <p>\n                 <code>AmiID</code>\n              </p>\n           </li>\n
        <li>\n              <p>\n                 <code>DualSubscription</code>\n              </p>\n           </li>\n
<li>\n              <p>\n                 <code>InstanceID</code>\n              </p>\n           </li>\n           <li>\n
  <p>\n                 <code>InstanceType</code>\n              </p>\n           </li>\n           <li>\n              <p>\n
    <code>ProductCode</code>\n              </p>\n           </li>\n           <li>\n              <p>\n
<code>Region</code>\n              </p>\n           </li>\n           <li>\n              <p>\n
<code>Status</code>\n              </p>\n           </li>\n           <li>\n              <p>\n
<code>UsageOperation</code>\n              </p>\n           </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n              <p>\n                 <code>contains</code>\n              </p>\n           </li>\n           <li>\n
<p>\n                 <code>equals</code>\n              </p>\n           </li>\n           <li>\n
              <p>\n                 <code>Notequal</code>\n              </p>\n           </li>\n        </ul>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
               }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
         "type": "structure",
         "members": {
            "Subscriptions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
               "traits": {
                  "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
         "type": "operation",
         "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
         },
         "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
         },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
               }
            }
         },

         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
         "type": "structure",
         "members": {
            "RegisteredSubscriptionProviders": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
               "traits": {
                  "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
         ],
         "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
               "method": "GET",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
         "type": "structure",
         "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}

               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
         "type": "structure",
         "members": {
            "tags": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {

"name": "Disabled",
          "value": "Disabled",
          "documentation": "Disabled OrganizationIntegration"
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
    "type": "list",
```

```
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/RegisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
              }
            },
            "SubscriptionProviderArn": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
```

```
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
                }
            },
             "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {

                  "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
                {
                    "name": "Successful",
```

```
                "value": "Successful",
                "documentation": "Successful status"
            },
            {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String",
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            }
        }
     },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
        },
```

```
            "Type": {
               "target": "smithy.api#String",
               "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with
Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace.
Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing
from Amazon EC2 or BYOS.</p>"
               }
            },
            "InstanceCount": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
               "traits": {
                  "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
         "type": "list",

       "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "RedHat",
                  "value": "RedHat",
                  "documentation": "RedHat subscription provider namespace"
               }
            ]
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
```

```
        "type":
"list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "ACTIVE",
              "value": "ACTIVE",
              "documentation": "ACTIVE status"
            },
            {
              "name": "INVALID",
              "value": "INVALID",
              "documentation": "INVALID status"
            },
            {
              "name": "PENDING",
              "value": "PENDING",
              "documentation": "PENDING status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                 "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
      "type": "map",
      "key":
{
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
               "method": "DELETE",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
         "type": "structure",

    "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "tagKeys": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input":
 {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
```

```
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
                }
            },
            "HomeRegions": {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and

do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all

other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.57 github.com/go-jose/go-jose/v3 3.0.4

1.57.1 Available under license :

Copyright (c) 2012 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its

distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,

WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

1.58 c-ares 1.34.5-r0

1.58.1 Available under license :

/* MIT License
*
* Copyright (c) John Schember
*
* Permission is hereby granted, free of charge, to any person obtaining a copy
* of this software and associated documentation files (the "Software"), to deal
* in the Software without restriction, including without limitation the rights
* to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
* copies of the Software, and to permit persons to whom the Software is
* furnished to do so, subject to the following conditions:
*
* The above copyright notice and this permission notice (including the next
* paragraph) shall be included in all copies or substantial portions of the
* Software.
*
* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
* IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
* FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
* AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
* LIABILITY, WHETHER
IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
* OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
* SOFTWARE.
*
* SPDX-License-Identifier: MIT
*/
MIT License

Copyright (c) 1998 Massachusetts Institute of Technology
Copyright (c) 2007 - 2023 Daniel Stenberg with many contributors, see AUTHORS
file.

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of
the Software, and to permit persons to whom the Software is furnished to do so,
subject to the following conditions:

The above copyright notice and this permission notice (including the next

paragraph) shall be included in all copies or substantial portions of the
Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS
BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.59 aws-sdk-go-v2-service-sso 1.29.1

1.59.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity

```
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
```

```
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string

 // Product name.
 //
 // This member is required.
 ProductName *string
```

```
 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // Date and time range during which the license is valid, in ISO8601-UTC format.
 //
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
```

```
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
```

```
  name: License Scan
  runs-on: ubuntu-latest
  strategy:
    matrix:
      python-version: [3.9]

  steps:
    - name: Checkout target
      uses: actions/checkout@v2
      with:
        path: sdkbase
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
       uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
```

spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming

RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer

InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

```
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
```

```
//
  - Fingerprint
//
//   - IssuerName
//
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
```

```
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
              "target": "smithy.api#String"
           }
        },
        "traits": {
           "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
           "smithy.api#error": "client"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
      "members": {
        "DomainName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
          }
        },
        "DomainIpv4List": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
          "traits": {
            "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
            "smithy.api#length": {
              "min": 1,
```

```
                    "max": 2
                }
            }
        },
        "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
        },
        "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "SELF_MANAGED",
                "value": "SELF_MANAGED",
                "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
                "name": "AWS_MANAGED",
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
            }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#Arn": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
          "smithy.api#http":
{
            "code": 200,
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
              "smithy.api#required": {}
            }
          },
           "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
```

```
      "members": {
        "InstanceUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
         }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

       {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
       },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
      ],
      "traits": {
        "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/license-server/DeleteLicenseServerEndpoint"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
      "type": "structure",
      "members": {
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                "smithy.api#required": {}
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "IdentityProviderArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
```

```
                "smithy.api#length": {
                    "min": 1
                },

    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
```

```
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
               "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
               "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
               "smithy.api#required": {}
            }
          },
           "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
               "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
               "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
               "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
               "smithy.api#required": {}
            }
```

```
            },
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
               }
            },
            "FailureMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
         "type": "list",
         "member": {

           "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
         "type": "structure",
         "members": {
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                  "smithy.api#required": {}
               }
            },
            "Products": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                  "smithy.api#required": {}
```

```
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },

      "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details \n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
```

```
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
```

```
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

      "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
```

```
        },
        "UseFIPS": {
          "builtIn": "AWS::UseFIPS",
          "required": true,
          "default": false,
          "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
          "type": "Boolean"
        },
        "Endpoint": {
          "builtIn": "SDK::Endpoint",
          "required": false,
          "documentation": "Override the endpoint used to send this request",
          "type": "String"
        }
      },
      "rules": [
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Endpoint"
                }
              ]
            }
           ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [
                {
```

```
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "aws.partition",

                      "argv": [
                        {
                          "ref": "Region"
```

```
                }
              ],
              "assign": "PartitionResult"
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
```

true

```
                  ]
                },
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
```

"fn": "booleanEquals",

```
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        }
                      ]
                    },
```

```
                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

                ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }

    ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
```

```
{
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "fn": "getAttr",
                                            "argv": [

                {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsFIPS"
                                        ]
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

  }
                    ],
```

```
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

         }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
```

```
                ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "DualStack is enabled but this partition does not support DualStack",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

            "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
      }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",

      "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS":
true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint":
{
                "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
```

```
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
```

```
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
```

```
                {
                  "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
                    }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack":
 false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error":
```

```
"Invalid Configuration: FIPS and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },
                  {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": true,
                      "Endpoint": "https://example.com"
                     }
                  },
                  {
                    "documentation": "Missing region",
                    "expect": {
                      "error": "Invalid Configuration: Missing Region"
                    }
                  }
                ],
                "version": "1.0"
              }
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
            "type": "structure",
            "members": {
              "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
              },
              "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
```

```
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
    "type": "string"
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
    }
},
```

```
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
    "traits": {
      "smithy.api#enum": [
         {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
         },
         {
```

```
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
            }
        },
        "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n<ul>\n<li>\n<p>Product</p>\n</li>\n<li>\n<p>DirectoryId</p>\n</li>\n</ul>"
            }
        },
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
    "type": "structure",
    "members": {
        "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
            }
        },
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/instance/ListInstances"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
```

```
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoints": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
              }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "ProductUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
              }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
```

```
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
         },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceUserSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
```

```
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"

      }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
```

```
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

           "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                "smithy.api#required": {}
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",
```

```
        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation":
"<p>Contains settings for a specific server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "RDS_SAL",
                "value": "RDS_SAL",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Settings": {

      "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                "smithy.api#length": {
                  "min": 1
                },
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
```

```
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                "smithy.api#required": {}
              }
            }
          },

          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

             "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
```

provider. \n <note>\n
Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as Pending billing status) in Amazon Web Services Billing. For more information, see Viewing your\n\t\t\t\tmonthly charges in the Amazon Web Services Billing User Guide. \n </note>",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/user/StartProductSubscription"
}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
"type": "structure",
"members": {
"Username": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The user name
from the identity provider of the user. ",
"smithy.api#required": {}
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " An object that specifies details for the identity provider. ",
"smithy.api#required": {}
}
},
"Product": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The name of the user-based subscription product. \n
Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}
}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user for whom to start the product \n\t\t\tsubscription. "
}

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n          </p>"
                }
            },
            "ProductUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
```

```
    "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    },
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 50
      },
      "smithy.api#sensitive": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
     },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
      "smithy.api#http": {
        "method": "PUT",
        "uri": "/tags/{ResourceArn}"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
```

```
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
```

```
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
```

```
            },
            "TagKeys": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                   "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
 {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash

```
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
```

```
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
```

```
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
```

```
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
```

```
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
```

```
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
```

```
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string
```

```
 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
```

```
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
```

```
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
```

```
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
```

```
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
```

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above

copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

```
type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
```

```
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
```

```
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
```

```
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
```

Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },

    {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
```

```
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
```

```
        "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
               "traits": {
                  "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
               }
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
         "type": "structure",
         "members": {
            "AmiId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
               }
            },
            "InstanceID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
               }
            },
            "InstanceType": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The instance type of the resource.</p>"
               }
            },
            "AccountID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
```

```
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

   "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
          "type": "service",
          "version": "2018-05-10",
          "operations": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
          ],
          "traits": {
            "aws.api#service": {
              "sdkId": "License Manager Linux Subscriptions",
               "arnNamespace": "license-manager-linux-subscriptions",
              "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
```

```
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
```

```
      "Endpoint": {
        "builtIn": "SDK::Endpoint",
        "required": false,
        "documentation": "Override the endpoint used to send this request",
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }

],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
```

```
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"

          }
          ],
          "type": "tree"
        },
        {
          "conditions": [],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {

          "fn": "aws.partition",
                        "argv": [
                          {
                            "ref": "Region"
```

```
                }
              ],
              "assign": "PartitionResult"
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {

                  "ref": "UseFIPS"
                    },
                    true
                  ]
                },
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }

],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"

},
                                "supportsFIPS"
                            ]
                          }
                        ]
                      },
```

```
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [

                                                     {
                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],

        "rules": [
                                                {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],

                                "type": "tree"
                                        }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
```

```
                                {

            "conditions": [
                                    {
                                       "fn": "booleanEquals",
                                       "argv": [
                                          {
                                             "ref": "UseFIPS"
                                          },
                                          true
                                       ]
                                    }
                                 ],
                                 "rules": [
                                    {
                                       "conditions": [
                                          {

                           "fn": "booleanEquals",
                                             "argv": [
                                                {
                                                   "fn": "getAttr",
                                                   "argv": [
                                                      {
                                                         "ref": "PartitionResult"
                                                      },
                                                      "supportsFIPS"
                                                   ]
                                                },
                                                true

                                          ]
                                       }
                                    ],
                                    "rules": [
                                       {
                                          "conditions": [],
                                          "rules": [
                                             {
                                                "conditions": [],
                                                "endpoint": {
                                                   "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                   "headers": {}
                                                },
                                                "type": "endpoint"
```

```
                        }
                      ],
                      "type": "tree"
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "FIPS is enabled
but this partition does not support FIPS",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true

          ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {

                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]
                        }
                      ]
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [

        {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                          "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
                      }
                    ],
                    "type": "tree"

                }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [],
                "endpoint": {
                  "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          }
        ],
```

```
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

  }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
```

```
                }
              },
              {
                "documentation": "Missing region",

              "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
              "name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Instances"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
          "type": "structure",
          "members": {
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
        <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
            <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
         "type": "structure",
```

```
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptions"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
```

```
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
              "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
```

```
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
```

```
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
```

```
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

          "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
             },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
```

```
                "min": 1,
                "max": 100
            }
        }
    },
    "traits": {
        "smithy.api#length": {
            "min": 1,
            "max": 100
        },
        "smithy.api#uniqueItems": {}
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
        "Name": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
        },
        "Type": {
            "target": "smithy.api#String",
            "traits": {

 "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
        },
        "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
```

```
                "value": "INVALID",
                "documentation": "INVALID status"
              },
              {
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
```

```
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
```

```
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
      "type": "structure",
```

```
    "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
 {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
```

```
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
```

```
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
```

```
            "smithy.api#error": "client"
          }
        }
      }
    }
}
```

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step

spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.60 libeconf 0.6.3-r0

1.60.1 Available under license :

Copyright (c) 2019 SUSE LLC

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR

IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE
OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.

1.61 readline 8.2.13-r0

1.61.1 Available under license :

@c The GNU Free Documentation License.
@center Version 1.3, 3 November 2008

@c This file is intended to be included within another document,
@c hence no sectioning command or @node.

@display
Copyright @copyright{} 2000, 2001, 2002, 2007, 2008 Free Software Foundation, Inc.
@uref{http://fsf.org/}

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
@end display

@enumerate 0
@item
PREAMBLE

The purpose of this License is to make a manual, textbook, or other
functional and useful document @dfn{free} in the sense of freedom: to
assure everyone the effective freedom to copy and redistribute it,
with or without modifying it, either commercially or noncommercially.
Secondarily, this License preserves for the author and publisher a way
to get credit for their work, while not being considered responsible
for modifications made by others.

This License is a kind of ``copyleft'', which means that derivative
works of the document
must themselves be free in the same sense. It
complements the GNU General Public License, which is a copyleft
license designed for free software.

We have designed this License in order to use it for manuals for free
software, because free software needs free documentation: a free
program should come with manuals providing the same freedoms that the
software does. But this License is not limited to software manuals;

it can be used for any textual work, regardless of subject matter or whether it is published as a printed book. We recommend this License principally for works whose purpose is instruction or reference.

@item
APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that contains a notice placed by the copyright holder saying it can be distributed under the terms of this License. Such a notice grants a world-wide, royalty-free license, unlimited in duration, to use that work under the conditions stated herein. The ``Document'', below, refers
to any such manual or work. Any member of the public is a licensee, and is addressed as ``you''. You accept the license if you copy, modify or distribute the work in a way requiring permission under copyright law.

A ``Modified Version'' of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A ``Secondary Section'' is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject (or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics.) The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political
position regarding
them.

The ``Invariant Sections'' are certain Secondary Sections whose titles are designated, as being those of Invariant Sections, in the notice that says that the Document is released under this License. If a section does not fit the above definition of Secondary then it is not allowed to be designated as Invariant. The Document may contain zero Invariant Sections. If the Document does not identify any Invariant Sections then there are none.

The ``Cover Texts'' are certain short passages of text that are listed, as Front-Cover Texts or Back-Cover Texts, in the notice that says that the Document is released under this License. A Front-Cover Text may be at most 5 words, and a Back-Cover Text may be at most 25 words.

A ``Transparent'' copy of the Document means a machine-readable copy,

represented in a format whose specification is available to the
general public, that is suitable for revising the document
straightforwardly with generic text editors or (for
images composed of
pixels) generic paint programs or (for drawings) some widely available
drawing editor, and that is suitable for input to text formatters or
for automatic translation to a variety of formats suitable for input
to text formatters. A copy made in an otherwise Transparent file
format whose markup, or absence of markup, has been arranged to thwart
or discourage subsequent modification by readers is not Transparent.
An image format is not Transparent if used for any substantial amount
of text. A copy that is not ``Transparent'' is called ``Opaque''.

Examples of suitable formats for Transparent copies include plain
@sc{ascii} without markup, Texinfo input format, La@TeX{} input
format, @acronym{SGML} or @acronym{XML} using a publicly available
@acronym{DTD}, and standard-conforming simple @acronym{HTML},
PostScript or @acronym{PDF} designed for human modification. Examples
of transparent image formats include @acronym{PNG}, @acronym{XCF} and
@acronym{JPG}. Opaque formats
include proprietary formats that can be
read and edited only by proprietary word processors, @acronym{SGML} or
@acronym{XML} for which the @acronym{DTD} and/or processing tools are
not generally available, and the machine-generated @acronym{HTML},
PostScript or @acronym{PDF} produced by some word processors for
output purposes only.

The ``Title Page'' means, for a printed book, the title page itself,
plus such following pages as are needed to hold, legibly, the material
this License requires to appear in the title page. For works in
formats which do not have any title page as such, ``Title Page'' means
the text near the most prominent appearance of the work's title,
preceding the beginning of the body of the text.

The ``publisher'' means any person or entity that distributes copies
of the Document to the public.

A section ``Entitled XYZ'' means a named subunit of the Document whose
title either is precisely XYZ or contains XYZ in parentheses following
text that translates XYZ in
another language. (Here XYZ stands for a
specific section name mentioned below, such as ``Acknowledgements'',
``Dedications'', ``Endorsements'', or ``History''.) To ``Preserve the Title''
of such a section when you modify the Document means that it remains a
section ``Entitled XYZ'' according to this definition.

The Document may include Warranty Disclaimers next to the notice which
states that this License applies to the Document. These Warranty

Disclaimers are considered to be included by reference in this
License, but only as regards disclaiming warranties: any other
implication that these Warranty Disclaimers may have is void and has
no effect on the meaning of this License.

@item
VERBATIM COPYING

You may copy and distribute the Document in any medium, either
commercially or noncommercially, provided that this License, the
copyright notices, and the license notice saying this License applies
to the Document are reproduced in all copies, and that you add no other
conditions whatsoever
 to those of this License. You may not use
technical measures to obstruct or control the reading or further
copying of the copies you make or distribute. However, you may accept
compensation in exchange for copies. If you distribute a large enough
number of copies you must also follow the conditions in section 3.

You may also lend copies, under the same conditions stated above, and
you may publicly display copies.

@item
COPYING IN QUANTITY

If you publish printed copies (or copies in media that commonly have
printed covers) of the Document, numbering more than 100, and the
Document's license notice requires Cover Texts, you must enclose the
copies in covers that carry, clearly and legibly, all these Cover
Texts: Front-Cover Texts on the front cover, and Back-Cover Texts on
the back cover. Both covers must also clearly and legibly identify
you as the publisher of these copies. The front cover must present
the full title with all words of the title equally prominent and
visible.
 You may add other material on the covers in addition.
Copying with changes limited to the covers, as long as they preserve
the title of the Document and satisfy these conditions, can be treated
as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit
legibly, you should put the first ones listed (as many as fit
reasonably) on the actual cover, and continue the rest onto adjacent
pages.

If you publish or distribute Opaque copies of the Document numbering
more than 100, you must either include a machine-readable Transparent
copy along with each Opaque copy, or state in or with each Opaque copy
a computer-network location from which the general network-using

public has access to download using public-standard network protocols
a complete Transparent copy of the Document, free of added material.
If you use the latter option, you must take reasonably prudent steps,
when you begin distribution of Opaque copies in quantity, to ensure
that
this Transparent copy will remain thus accessible at the stated
location until at least one year after the last time you distribute an
Opaque copy (directly or through your agents or retailers) of that
edition to the public.

It is requested, but not required, that you contact the authors of the
Document well before redistributing any large number of copies, to give
them a chance to provide you with an updated version of the Document.

@item
MODIFICATIONS

You may copy and distribute a Modified Version of the Document under
the conditions of sections 2 and 3 above, provided that you release
the Modified Version under precisely this License, with the Modified
Version filling the role of the Document, thus licensing distribution
and modification of the Modified Version to whoever possesses a copy
of it. In addition, you must do these things in the Modified Version:

@enumerate A
@item
Use in the Title Page (and on the covers, if any) a title distinct
from that of the Document, and from
those of previous versions
(which should, if there were any, be listed in the History section
of the Document). You may use the same title as a previous version
if the original publisher of that version gives permission.

@item
List on the Title Page, as authors, one or more persons or entities
responsible for authorship of the modifications in the Modified
Version, together with at least five of the principal authors of the
Document (all of its principal authors, if it has fewer than five),
unless they release you from this requirement.

@item
State on the Title page the name of the publisher of the
Modified Version, as the publisher.

@item
Preserve all the copyright notices of the Document.

@item

Add an appropriate copyright notice for your modifications
adjacent to the other copyright notices.

@item
Include, immediately after the copyright notices, a license notice
giving the public permission to use the Modified Version under the
terms of this License, in the form shown in
the Addendum below.

@item
Preserve in that license notice the full lists of Invariant Sections
and required Cover Texts given in the Document's license notice.

@item
Include an unaltered copy of this License.

@item
Preserve the section Entitled ``History'', Preserve its Title, and add
to it an item stating at least the title, year, new authors, and
publisher of the Modified Version as given on the Title Page. If
there is no section Entitled ``History'' in the Document, create one
stating the title, year, authors, and publisher of the Document as
given on its Title Page, then add an item describing the Modified
Version as stated in the previous sentence.

@item
Preserve the network location, if any, given in the Document for
public access to a Transparent copy of the Document, and likewise
the network locations given in the Document for previous versions
it was based on. These may be placed in the ``History'' section.
You may omit a network location for a work that was published at
least
four years before the Document itself, or if the original
publisher of the version it refers to gives permission.

@item
For any section Entitled ``Acknowledgements'' or ``Dedications'', Preserve
the Title of the section, and preserve in the section all the
substance and tone of each of the contributor acknowledgements and/or
dedications given therein.

@item
Preserve all the Invariant Sections of the Document,
unaltered in their text and in their titles. Section numbers
or the equivalent are not considered part of the section titles.

@item
Delete any section Entitled ``Endorsements''. Such a section

may not be included in the Modified Version.

@item
Do not retitle any existing section to be Entitled ``Endorsements'' or
to conflict in title with any Invariant Section.

@item
Preserve any Warranty Disclaimers.
@end enumerate

If the Modified Version includes new front-matter sections or
appendices that qualify as Secondary Sections and contain no material
copied from the Document,
 you may at your option designate some or all
of these sections as invariant. To do this, add their titles to the
list of Invariant Sections in the Modified Version's license notice.
These titles must be distinct from any other section titles.

You may add a section Entitled ``Endorsements'', provided it contains
nothing but endorsements of your Modified Version by various
parties---for example, statements of peer review or that the text has
been approved by an organization as the authoritative definition of a
standard.

You may add a passage of up to five words as a Front-Cover Text, and a
passage of up to 25 words as a Back-Cover Text, to the end of the list
of Cover Texts in the Modified Version. Only one passage of
Front-Cover Text and one of Back-Cover Text may be added by (or
through arrangements made by) any one entity. If the Document already
includes a cover text for the same cover, previously added by you or
by arrangement made by the same entity you are acting on behalf
 of,
you may not add another; but you may replace the old one, on explicit
permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License
give permission to use their names for publicity for or to assert or
imply endorsement of any Modified Version.

@item
COMBINING DOCUMENTS

You may combine the Document with other documents released under this
License, under the terms defined in section 4 above for modified
versions, provided that you include in the combination all of the
Invariant Sections of all of the original documents, unmodified, and
list them all as Invariant Sections of your combined work in its
license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and
multiple identical Invariant Sections may be replaced with a single
copy. If there are multiple Invariant Sections with the same name but
different contents, make the title of
 each such section unique by
adding at the end of it, in parentheses, the name of the original
author or publisher of that section if known, or else a unique number.
Make the same adjustment to the section titles in the list of
Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections Entitled ``History''
in the various original documents, forming one section Entitled
``History''; likewise combine any sections Entitled ``Acknowledgements'',
and any sections Entitled ``Dedications''. You must delete all
sections Entitled ``Endorsements.''

@item
COLLECTIONS OF DOCUMENTS

You may make a collection consisting of the Document and other documents
released under this License, and replace the individual copies of this
License in the various documents with a single copy that is included in
the collection, provided that you follow the rules of this License for
verbatim copying of each of the documents in all other respects.

You may extract
 a single document from such a collection, and distribute
it individually under this License, provided you insert a copy of this
License into the extracted document, and follow this License in all
other respects regarding verbatim copying of that document.

@item
AGGREGATION WITH INDEPENDENT WORKS

A compilation of the Document or its derivatives with other separate
and independent documents or works, in or on a volume of a storage or
distribution medium, is called an ``aggregate'' if the copyright
resulting from the compilation is not used to limit the legal rights
of the compilation's users beyond what the individual works permit.
When the Document is included in an aggregate, this License does not
apply to the other works in the aggregate which are not themselves
derivative works of the Document.

If the Cover Text requirement of section 3 is applicable to these
copies of the Document, then if the Document is less than one half of
the entire aggregate, the Document's Cover Texts may

be placed on
covers that bracket the Document within the aggregate, or the
electronic equivalent of covers if the Document is in electronic form.
Otherwise they must appear on printed covers that bracket the whole
aggregate.

@item
TRANSLATION

Translation is considered a kind of modification, so you may
distribute translations of the Document under the terms of section 4.
Replacing Invariant Sections with translations requires special
permission from their copyright holders, but you may include
translations of some or all Invariant Sections in addition to the
original versions of these Invariant Sections. You may include a
translation of this License, and all the license notices in the
Document, and any Warranty Disclaimers, provided that you also include
the original English version of this License and the original versions
of those notices and disclaimers. In case of a disagreement between
the translation and the original version of this License or a notice
or disclaimer, the original
version will prevail.

If a section in the Document is Entitled ``Acknowledgements'',
``Dedications'', or ``History'', the requirement (section 4) to Preserve
its Title (section 1) will typically require changing the actual
title.

@item
TERMINATION

You may not copy, modify, sublicense, or distribute the Document
except as expressly provided under this License. Any attempt
otherwise to copy, modify, sublicense, or distribute it is void, and
will automatically terminate your rights under this License.

However, if you cease all violation of this License, then your license
from a particular copyright holder is reinstated (a) provisionally,
unless and until the copyright holder explicitly and finally
terminates your license, and (b) permanently, if the copyright holder
fails to notify you of the violation by some reasonable means prior to
60 days after the cessation.

Moreover, your license from a particular copyright holder is
reinstated permanently if the copyright holder notifies
you of the
violation by some reasonable means, this is the first time you have
received notice of violation of this License (for any work) from that

copyright holder, and you cure the violation prior to 30 days after
your receipt of the notice.

Termination of your rights under this section does not terminate the
licenses of parties who have received copies or rights from you under
this License. If your rights have been terminated and not permanently
reinstated, receipt of a copy of some or all of the same material does
not give you any rights to use it.

@item
FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions
of the GNU Free Documentation License from time to time. Such new
versions will be similar in spirit to the present version, but may
differ in detail to address new problems or concerns. See
@uref{http://www.gnu.org/copyleft/}.

Each version of the License is given a distinguishing version number.
If the Document specifies that
 a particular numbered version of this
License ``or any later version'' applies to it, you have the option of
following the terms and conditions either of that specified version or
of any later version that has been published (not as a draft) by the
Free Software Foundation. If the Document does not specify a version
number of this License, you may choose any version ever published (not
as a draft) by the Free Software Foundation. If the Document
specifies that a proxy can decide which future versions of this
License can be used, that proxy's public statement of acceptance of a
version permanently authorizes you to choose that version for the
Document.

@item
RELICENSING

``Massive Multiauthor Collaboration Site'' (or ``MMC Site'') means any
World Wide Web server that publishes copyrightable works and also
provides prominent facilities for anybody to edit those works. A
public wiki that anybody can edit is an example of such a server. A
``Massive Multiauthor Collaboration'' (or ``MMC'')
 contained in the
site means any set of copyrightable works thus published on the MMC
site.

``CC-BY-SA'' means the Creative Commons Attribution-Share Alike 3.0
license published by Creative Commons Corporation, a not-for-profit
corporation with a principal place of business in San Francisco,
California, as well as future copyleft versions of that license

published by that same organization.

``Incorporate'' means to publish or republish a Document, in whole or
in part, as part of another Document.

An MMC is ``eligible for relicensing'' if it is licensed under this
License, and if all works that were first published under this License
somewhere other than this MMC, and subsequently incorporated in whole
or in part into the MMC, (1) had no cover texts or invariant sections,
and (2) were thus incorporated prior to November 1, 2008.

The operator of an MMC Site may republish an MMC contained in the site
under CC-BY-SA on the same site at any time before August 1, 2009,
provided the
 MMC is eligible for relicensing.

@end enumerate

@page
@heading ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of
the License in the document and put the following copyright and
license notices just after the title page:

@smallexample
@group
 Copyright (C) @var{year} @var{your name}.
 Permission is granted to copy, distribute and/or modify this document
 under the terms of the GNU Free Documentation License, Version 1.3
 or any later version published by the Free Software Foundation;
 with no Invariant Sections, no Front-Cover Texts, and no Back-Cover
 Texts. A copy of the license is included in the section entitled ``GNU
 Free Documentation License''.
@end group
@end smallexample

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts,
replace the ``with@dots{}Texts.'' line with this:

@smallexample
@group
   with the Invariant Sections being @var{list their titles}, with
   the Front-Cover
 Texts being @var{list}, and with the Back-Cover Texts
   being @var{list}.
@end group
@end smallexample

If you have Invariant Sections without Cover Texts, or some other
combination of the three, merge those two alternatives to suit the
situation.

If your document contains nontrivial examples of program code, we
recommend releasing these examples in parallel under your choice of
free software license, such as the GNU General Public License,
to permit their use in free software.

@c Local Variables:
@c ispell-local-pdict: "ispell-dict"
@c End:
GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed
to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that

you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute
and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which
contains
a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies

of the Program's
source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole
or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered
independent and separate works in
themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest

your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the

source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each
time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution
of the Program by
all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any

patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.

EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN
IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License

along with this program; if not, write to the Free Software
Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and
`show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for
software and other kinds of works.

The licenses for most software and other practical works are designed

to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand

ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices"

to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The
"System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally
available free
programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately
publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to
"keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution
medium, is called an
"aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users

beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for

the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or authors of the material; or

e) Declining to grant rights under trademark law for use of some
trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that
material by anyone who conveys the material (or modified versions of
it) with contractual assumptions of liability to the recipient, for
any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further
restrictions" within the meaning of section 10. If the Program as you
received it, or any part of it, contains a notice stating that it is
governed by this License along with a term that is a further
restriction, you may remove that term. If a license document contains
a further restriction but permits relicensing or conveying under this
License, you may add to a covered work material governed by the terms
of that license document, provided that the further restriction does
not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you
must place, in the relevant source files, a statement of the
additional terms that apply to those files, or a notice indicating
where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the
form of a separately written license, or stated as exceptions;
the above
requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly
provided under this License. Any attempt otherwise to propagate or
modify it is void, and will automatically terminate your rights under
this License (including any patent licenses granted under the third
paragraph of section 11).

However, if you cease all violation of this License, then your
license from a particular copyright holder is reinstated (a)
provisionally, unless and until the copyright holder explicitly and
finally terminates your license, and (b) permanently, if the copyright
holder fails to notify you of the violation by some reasonable means
prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is
reinstated permanently if the copyright holder notifies you of the

violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright
holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for

sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a

covered work, and grant a patent license to some of the parties
receiving the covered work authorizing them to use, propagate, modify
or convey a specific copy of the covered
work, then the patent license
you grant is automatically extended to all recipients of the covered
work and works based on it.

A patent license is "discriminatory" if it does not include within
the scope of its coverage, prohibits the exercise of, or is
conditioned on the non-exercise of one or more of the rights that are
specifically granted under this License. You may not convey a covered
work if you are a party to an arrangement with a third party that is
in the business of distributing software, under which you make payment
to the third party based on the extent of your activity of conveying
the work, and under which the third party grants, to any of the
parties who would receive the covered work from you, a discriminatory
patent license (a) in connection with copies of the covered work
conveyed by you (or copies made from those copies), or (b) primarily
for and in connection with specific products or compilations that
contain the covered work, unless you entered into that arrangement,
or
that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting
any implied license or other defenses to infringement that may
otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot convey a
covered work so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you may
not convey it at all. For example, if you agree to terms that obligate you
to collect a royalty for further conveying from those to whom you convey
the Program, the only way you could satisfy both those terms and this
License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have
permission to link or combine any covered work with a work licensed
under version 3 of the GNU Affero General Public License into a single
combined work, and to convey the resulting work. The terms of this
License will continue to apply to the part which is the covered work,
but the special requirements of the GNU Affero General Public License,
section 13, concerning interaction through a network will apply to the

combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF

DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program. If not, see <http://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short

notice like this when it starts in an interactive mode:

```
<program>  Copyright (C) <year>  <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<http://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want to
do, use the GNU Lesser General
Public License instead of this License. But first, please read
<http://www.gnu.org/philosophy/why-not-lgpl.html>.

1.62 github.com/playwright-community/playwright-go 0.5200.0

1.62.1 Available under license :

MIT License

Copyright (c) 2020 Max Schmitt

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE

AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.63 skalibs 2.14.3.0-r0

1.63.1 Available under license :

Copyright (c) 2011-2024 Laurent Bercot <ska-skaware@skarnet.org>

Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

1.64 iputils-clockdiff 20240905-r0

1.64.1 Available under license :

arping: GPL-2.0-or-later
clockdiff: BSD-3-Clause
ping: BSD-3-Clause
tracepath: GPL-2.0-or-later

Files containing license texts are available in Documentation directory.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED

WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.
Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the
Program does.

1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License

along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of

a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under

this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to

decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing
version number. If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE,
THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,

REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR
THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU
General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this
is what you want to do, use the GNU Lesser General
Public License instead of this License.

1.65 iputils-arping 20240905-r0

1.65.1 Available under license :

arping: GPL-2.0-or-later
clockdiff: BSD-3-Clause
ping: BSD-3-Clause
tracepath: GPL-2.0-or-later

Files containing license texts are available in Documentation directory.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.
Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether

gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the
Program does.

1. You may copy and distribute verbatim copies of the Program's

source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to

exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial distribution
and only if you
received the program in object code or executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts as
distribution of the source
code, even though third parties are not
compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the

integrity of the free software distribution system, which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to
decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing
version number. If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE,
THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES

PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR
THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU
General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

```
  Gnomovision version 69, Copyright (C) year name of author
  Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
  This is free software, and you are welcome to redistribute
it
  under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

```
 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this
 is what you want to do, use the GNU Lesser General
Public License instead of this License.

1.66 aws-sdk-go-v2-aws-protocol-eventstream 1.7.1

1.66.1 Available under license :

```
GetLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration
```

```
// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}
```

```
type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
```

```
        with:
          repository: nexB/scancode-toolkit
          path: scancode-toolkit
          fetch-depth: 1
      - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
        with:
          python-version: ${{ matrix.python-version }}
      # ScanCode
      - name: Self-configure scancode
        working-directory: ./scancode-toolkit
        run: ./scancode --help
      - name: Run Scan code on target
        run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
      - name: Run Scan code on pr ref
        run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
      # compare
      - name: License test
        run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
```

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength

SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
      "members": {
        "DomainName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
          }
        },
        "DomainIpv4List": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
          "traits": {
            "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 2
```

```
                }
              }
            },
            "DomainCredentialsProvider": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "SELF_MANAGED",
                "value": "SELF_MANAGED",
                "documentation": "SELF_MANAGED type of Active Directory"
              },
              {
                "name": "AWS_MANAGED",
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Arn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
          }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n          <note>\n             <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
{
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
            }
        },
        "traits": {

    "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
```

```
        "InstanceUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
         }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

       {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
              }
            },
            "LicenseServerEndpointArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
          "type": "union",
          "members": {
            "SecretsManagerCredentialsProvider":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
      ],
      "traits": {
        "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/license-server/DeleteLicenseServerEndpoint"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
      "type": "structure",
      "members": {
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                "smithy.api#required": {}
              }
            },
             "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoint": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
              "traits": {
                "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
              }
            }
          },
           "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
              }
            },
            "InstanceUserArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
```

```
                    "min": 1
                },

    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
```

```
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
           "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
               }
            },
            "FailureMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
         "type": "list",
         "member": {

           "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
         "type": "structure",
         "members": {
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                  "smithy.api#required": {}
               }
            },
            "Products": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                  "smithy.api#required": {}
               }
```

```
            },
            "LastStatusCheckDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date of the last status check.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },

      "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
```

```
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                 }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
                }
            },
            "AssociationDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
                }
            },
            "DisassociationDate": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
```

```
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

        "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
              "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
```

```
        "UseFIPS": {
          "builtIn": "AWS::UseFIPS",
          "required": true,
          "default": false,
          "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
          "type": "Boolean"
        },
        "Endpoint": {
          "builtIn": "SDK::Endpoint",
          "required": false,
          "documentation": "Override the endpoint used to send this request",
          "type": "String"
        }
      },
      "rules": [
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Endpoint"
                }
              ]
            }
           ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [
                {
```

```
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "aws.partition",

                      "argv": [
                        {
                          "ref": "Region"
                        }
```

```
                ],
                "assign": "PartitionResult"
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

true

```
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
```

"fn": "booleanEquals",

```
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          }
                        ]
                      },
```

```
                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

                ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }

    ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
```

```
{
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "fn": "getAttr",
                                            "argv": [

                {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsFIPS"
                                        ]
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

  }
                    ],
```

```
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

         }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
```

```
                ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "DualStack is enabled but this partition does not support DualStack",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

            "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
      }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",

    "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS":
true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint":
{
                "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
```

```
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
```

```
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
```

```
                {
                  "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
                    }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack":
 false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error":
```

```
"Invalid Configuration: FIPS and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },
                  {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": true,
                      "Endpoint": "https://example.com"
                     }
                  },
                  {
                    "documentation": "Missing region",
                    "expect": {
                      "error": "Invalid Configuration: Missing Region"
                    }
                  }
                ],
                "version": "1.0"
              }
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
            "type": "structure",
            "members": {
              "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
              },
              "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
```

```
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
    "type": "string"
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
    }
},
```

```
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
    "traits": {
      "smithy.api#enum": [
         {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
         },
         {
```

```
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "IdentityProviderSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n<ul>\n <li>\n <p>Product</p>\n </li>\n <li>\n <p>DirectoryId</p>\n </li>\n </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
                "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/instance/ListInstances"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
```

```
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
              }
            },
            "NextToken": {
               "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoints": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
              }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "ProductUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
              }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
```

```
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
         },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceUserSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
```

```
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
```

```
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

           "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                "smithy.api#required": {}
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
              }
            ],
            "traits": {
              "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
              "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
              },
              "smithy.api#idempotent": {}
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
            "type": "structure",
            "members": {
              "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                  "smithy.api#required": {}
                }
              },

           "Product": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                  "smithy.api#required": {}
                }
              },
              "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                  "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
              },
              "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
              }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",
```

```
        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation":
"<p>Contains settings for a specific server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "RDS_SAL",
                    "value": "RDS_SAL",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
```

```
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                "smithy.api#required": {}
              }
            }
          },

          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

             "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
```

provider. \n <note>\n
Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as Pending billing status) in Amazon Web Services Billing. For more information, see Viewing your\n\t\t\t\tmonthly charges in the Amazon Web Services Billing User Guide. \n </note>",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/user/StartProductSubscription"
}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
"type": "structure",
"members": {
"Username": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The user name
from the identity provider of the user. ",
"smithy.api#required": {}
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " An object that specifies details for the identity provider. ",
"smithy.api#required": {}
}
},
"Product": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The name of the user-based subscription product. \n
Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}
}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user for whom to start the product \n\t\t\tsubscription. "
}

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n          </p>"
                }
            },
            "ProductUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
```

```
    "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    },
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 50
      },
      "smithy.api#sensitive": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
     },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
      "smithy.api#http": {
        "method": "PUT",
        "uri": "/tags/{ResourceArn}"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
```

```
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
```

```
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
```

```
            },
            "TagKeys": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                   "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
 {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
```

```
            "type": "structure",
            "members": {
                "message": {
                    "target": "smithy.api#String"
                }
            },
            "traits": {
                "smithy.api#documentation": "<p>A parameter is not valid.</p>",
                "smithy.api#error": "client"
            }
        }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
```

```
//   - ProductSKU
//
//   - Status
//
//
  - Fingerprint
//
//   - IssuerName
//
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
```

```
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string
```

```
 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
```

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
```

```
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData
```

```
// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
```

```
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string
```

```
 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {
```

```
// Date when the license is deleted.
DeletionDate *string

// License status.
Status types.LicenseDeletionStatus

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
```

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
```

```
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
```

RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider
resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                 }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
```

```
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

           "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
          }
        },
        "StatusMessage": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
          "traits": {
            "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
          }
        },
        "HomeRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
        },
        "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
        },
        "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
        },
        "RegisteredWithSubscriptionProvider": {
```

```
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
      "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
        "x-amzn-trace-id"
      ],
      "additionalExposedHeaders": [
        "x-amzn-errortype",
        "x-amzn-requestid",
        "x-amzn-trace-id"
      ]
    },
    "smithy.api#documentation": "<p>With License Manager,
```

```
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager Linux Subscriptions",
            "smithy.rules#endpointRuleSet": {
              "version": "1.0",
              "parameters": {
                "Region": {
                  "builtIn": "AWS::Region",
                  "required": false,
                  "documentation": "The AWS region used to dispatch the request.",
                  "type": "String"
                },
                "UseDualStack": {
                  "builtIn": "AWS::UseDualStack",
                  "required": true,
                  "default": false,
                  "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                   "type": "Boolean"
                },
                "UseFIPS": {
                  "builtIn": "AWS::UseFIPS",
                  "required": true,
                  "default": false,
                  "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                  "type": "Boolean"
                },
                "Endpoint": {
                  "builtIn": "SDK::Endpoint",
                  "required": false,
                  "documentation": "Override the endpoint used to send this request",
                  "type": "String"
                }
              },
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "isSet",
                      "argv": [
                        {
                          "ref": "Endpoint"
                        }
                      ]
                    }
                  ],
                  "rules": [
                    {
```

```
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }

            ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
```

```
    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {

                                    "ref": "UseFIPS"
                                        },
                                        true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
```

```
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }

  ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"

            },
                                "supportsFIPS"
                              ]
                            }
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [

                               {
                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                              ]
                            }
                          ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
```

```
      "rules": [
                                        {
                                          "conditions": [],
                                          "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                          },
                                          "type": "endpoint"
                                        }
                                      ],

                            "type": "tree"
                                    }
                                  ],
                                  "type": "tree"
                                },
                                {
                                  "conditions": [],
                                  "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                                  "type": "error"
                                }
                              ],
                              "type": "tree"
                            },
                            {

          "conditions": [
                                {
                                  "fn": "booleanEquals",
                                  "argv": [
                                    {
                                      "ref": "UseFIPS"
                                    },
                                    true
                                  ]
                                }
                              ],
                              "rules": [
                                {
                                  "conditions": [
                                    {

                        "fn": "booleanEquals",
                                        "argv": [
                                          {
```

```
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled
but this partition does not support FIPS",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
```

```
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true

                            ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [
                                                        {

                                                        "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],
                                            "type": "tree"

                                }
                                    ],
```

```
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {

         "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
              }

    },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
           },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
              }

           },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": false,
              "UseDualStack": true
```

```
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

  "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
```

```
                    "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
                  }
                },
                "params": {
                  "Region": "us-isob-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },

        {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
```

```
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
```

```
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
```

```
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Instances"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
   <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
          <li>\n              <p>\n                <code>DualSubscription</code>\n              </p>\n            </li>\n
 <li>\n              <p>\n                <code>InstanceID</code>\n              </p>\n            </li>\n            <li>\n
   <p>\n                <code>InstanceType</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
     <code>ProductCode</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>Region</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>Status</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>UsageOperation</code>\n              </p>\n            </li>\n          </ul>\n          <p>For each filter, you can use
 one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n          <ul>\n
     <li>\n              <p>\n                <code>contains</code>\n              </p>\n            </li>\n            <li>\n
 <p>\n                <code>equals</code>\n              </p>\n            </li>\n            <li>\n
```

```
            <p>\n                <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those
that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n
<code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n
<li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n
<p>The valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n
```

```
<code>contains</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>equals</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
      <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "RegisteredSubscriptionProviders"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSources": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

  "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
          }
```

```
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
            "smithy.api#range": {
              "min": 1,
              "max": 100
            }
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
          }
        }
      },

      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
```

```
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {
```

```
      "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },

         {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
```

```
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
             "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
             "smithy.api#required": {}
           }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
             "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat
Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
             "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
             "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
             "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
```

```
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
              }
            },
            "SubscriptionProviderStatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
              }
```

```
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {

                  "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "InProgress",
```

```
            "value": "InProgress",
            "documentation": "InProgress status"
          },
          {
            "name": "Completed",
            "value": "Completed",
            "documentation": "Completed status"
          },
          {
            "name": "Successful",
            "value": "Successful",
            "documentation": "Successful status"
          },
          {
            "name": "Failed",
            "value": "Failed",
            "documentation": "Failed status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

     "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
"list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
```

```
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                 "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
      "type": "map",
      "key":
{
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tagKeys": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
```

```
        "traits": {
            "smithy.api#input":
{}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
```

```
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
            }
        },
        "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
            }
        },
        "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
        }

    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
    "type": "structure",
    "members": {
      "LinuxSubscriptionsDiscovery": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
        "traits": {
          "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
        }
      },
      "LinuxSubscriptionsDiscoverySettings": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
        "traits": {
          "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
        }

  },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
```

```
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all

other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.67 zstd 1.3.1

1.67.1 Available under license :

BSD-style without advertising clause

1.68 github.com/aws/aws-sdk-go-v2/feature/s3/manager 1.19.4

1.68.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop

```
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
```

```
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer
```

```
// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata
```

```
 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
```

```
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
```

```
 ServiceID:     ServiceID,
 OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
 spanInitializeStart
 InterceptExecution
 RegisterServiceMetadata
 legacyEndpointContextSetter
 SetLogger
 OperationInputValidation
 spanInitializeEnd
 Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
 Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
 Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
 Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
```

RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning

Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
```

```
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
      "members": {
        "DomainName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
          }
        },
        "DomainIpv4List": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
          "traits": {
            "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 2
            }
          }
        },
        "DomainCredentialsProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
          "traits": {
            "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
          }
        },
        "DomainNetworkSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
          }
        }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n          <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http":
{
            "code": 200,
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
              "smithy.api#required": {}
            }
```

```
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                   "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                   "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                   "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                   "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                   "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                   "smithy.api#required": {}
                }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
         "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
         "type": "structure",
         "members": {
```

```
            "message": {
                "target": "smithy.api#String"
             }
          },
          "traits": {
             "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
             "smithy.api#error": "server"
          }
       },
       "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
             "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
             "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
             {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
             },
             {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
             },

          {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
             {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
             {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
             {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
             },
             {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
             "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
             "smithy.api#http": {
                "code": 200,
                "method": "POST",
```

```
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
```

```
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
         ],
         "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
```

```
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
```

```
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
```

```
                "smithy.api#required": {}
              }
            }
        },
        "traits": {
            "smithy.api#output": {}

}
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
```

```
subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
               }
            }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
```

```
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
```

```
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },

    "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
           }
        },
```

```
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "AssociationDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
               }
            },
            "DisassociationDate": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
```

```
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

         "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
```

```
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
```

```
"conditions": [
    {
      "fn": "isSet",
      "argv": [
        {
          "ref": "Endpoint"
        }
      ]
    }
  ],
"rules": [
    {
      "conditions": [
        {
          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseFIPS"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [
        {

          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseDualStack"
            },
            true
          ]
        }
      ],
      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
      "type": "error"
    },
    {
      "conditions": [],
      "endpoint": {
        "url": {
          "ref": "Endpoint"
        },
```

```
"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "isSet",
                "argv": [
                    {
                        "ref": "Region"
                    }
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "aws.partition",

                        "argv": [
                            {
                                "ref": "Region"
                            }
                        ],
                        "assign": "PartitionResult"
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseFIPS"
                                    },

true
                                ]
                            },
                            {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

            ]
                  }
                ],
                "rules": [
                  {
```

```
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

    ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [

 {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "fn": "getAttr",
                                                "argv": [

                    {
                                                        "ref": "PartitionResult"
                                                    },
```

```
                                    "supportsFIPS"
                                ]
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {

      "conditions": [
                        {
                            "fn": "booleanEquals",
```

```
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
                                            ]

            }
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }

                        ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "DualStack is enabled but this partition does not support DualStack",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
```

```
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect":
{
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-east-1",

    "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint": {
```

```
                "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint":
{
                "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS":
 true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
```

```
{
                    "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": false,
                 "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                }
            },
            "params": {
                "Region": "us-iso-east-1",
                "UseFIPS": true,
                "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
```

```
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true,
        "Endpoint": "https://example.com"
       }
    },
```

```
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "smithy.api#String",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
        },
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>"
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
              "value": "PROVISIONED",
              "documentation": ""
            },
            {
```

```
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
```

```
        "members": {
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>",
              "smithy.api#required": {}
            }
          },
          "ServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
            "smithy.api#required": {}
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "InstanceSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
               }
            },
            "NextToken":
 {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
```

```
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>InstanceId</p>\n
</li>\n        </ul>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
          "type": "structure",
           "members": {
            "InstanceSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output":
 {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
            }
          },
          "NextToken": {
             "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
           "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/ListProductSubscriptions"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
```

| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " An object that specifies details for the identity provider. ",
"smithy.api#required": {}
}
},
"MaxResults": {
"target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
"traits": {
"smithy.api#documentation": " The maximum number of results to return from a single
request. "
}
},
"Filters": {
"target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
"traits": {
"smithy.api#documentation": " You can use the following filters to streamline results: \n
\n \n Status \n \n \n Username \n
\n \n Domain \n \n "
}
},
"NextToken": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
"type": "structure",

"members": {
"ProductUserSummaries": {
"target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
"traits": {
"smithy.api#documentation": " Metadata that describes the list product subscriptions
operation. "
}

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
               "method": "GET",
               "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
         "type": "structure",
         "members": {
            "ResourceArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
           "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

  },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
```

```
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

        }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
                }
            },
            "NextToken": {
                "target":
 "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
```

```
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

         "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
              "target": "smithy.api#String",
              "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
              }
            },
            "SubscriptionEndDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
          "type": "structure",
          "members": {
            "RdsSalCredentialsProvider": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
```

```
                "smithy.api#required": {}
            }
        },

    "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
    "type": "structure",
    "members": {
        "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
                "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
```

```
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
   <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
```

```
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}

                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                 "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
              "code": 200,
              "method": "POST",
              "uri": "/user/StopProductSubscription"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
              }
            },
            "Product": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
              }
            },
            "ProductUserArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
              }
             }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
          "type": "structure",
          "members": {
```

```
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
         "type": "list",
         "member": {
            "target": "smithy.api#String"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
         "type": "list",
         "member": {
            "target": "smithy.api#String"
         },
         "traits": {
            "smithy.api#length": {
               "min": 0,
               "max": 50
            },
            "smithy.api#sensitive": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
         "type": "operation",
         "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
```

```
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                     "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/identity-provider/UpdateIdentityProviderSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
      "type": "structure",
      "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
          }
```

```
            },
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
               }
            },
            "UpdateSettings":
{
               "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
               "traits": {
                  "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n               <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
      <li>\n               <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n               <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n         </ul>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
         "type": "structure",
         "members": {
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
         "type": "structure",
         "members": {
            "AddSubnets": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
```

```
                "smithy.api#required":
 {}
              }
            },
            "RemoveSubnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
      }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
```

```
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
```

```
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
 Region:       region,
 ServiceID:    ServiceID,
 OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
 spanInitializeStart
 InterceptExecution
 RegisterServiceMetadata
 legacyEndpointContextSetter
 SetLogger
 OperationInputValidation
 spanInitializeEnd
 Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
 Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
 Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
```

```
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
```

```
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
```

OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
```

```
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
```

```
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
```

```
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
```

```
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
```

```
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
```

```
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata
```

```
 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
```

```
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
```

```
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
```

```
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
```

```
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
```

```
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
```

```
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
```

setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright

notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata

```
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
```

```
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
}
```

```
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
```

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },

    {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of name to filter by.</p>"
           }
        },
        "Values": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
          }
        },
        "Operator": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
          "traits": {
            "smithy.api#documentation": "<p>An operator for filtering results.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
```

```
        "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
```

```
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/GetServiceSettings"

        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
```

```
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
            }
        },
```

```
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

     "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
```

```
        "traits": {
            "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager Linux Subscriptions",
```

```
        "arnNamespace": "license-manager-linux-subscriptions",
        "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
      },
      "aws.auth#sigv4": {
        "name": "license-manager-linux-subscriptions"
      },
      "aws.protocols#restJson1": {},
      "smithy.api#cors": {
        "additionalAllowedHeaders": [
          "*",
          "content-type",
          "x-amz-content-sha256",
          "x-amz-user-agent",
          "x-amzn-platform-id",
          "x-amzn-trace-id"
        ],
        "additionalExposedHeaders": [
          "x-amzn-errortype",
          "x-amzn-requestid",
          "x-amzn-trace-id"
        ]
      },
      "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
      "smithy.api#title": "AWS License Manager Linux Subscriptions",
      "smithy.rules#endpointRuleSet": {
        "version": "1.0",
        "parameters": {
          "Region": {
            "builtIn": "AWS::Region",
            "required": false,
            "documentation": "The AWS region used to dispatch the request.",
            "type": "String"
          },
          "UseDualStack": {
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
            "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
```

```
      "type": "Boolean"
    },
    "Endpoint": {
      "builtIn": "SDK::Endpoint",
      "required": false,
      "documentation": "Override the endpoint used to send this request",
      "type": "String"
    }
  },
  "rules": [
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Endpoint"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseFIPS"
                },
                true
              ]
            }

],
          "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
          "type": "error"
        },
        {
          "conditions": [],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
```

```
                        },
                        true
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": {
                        "ref": "Endpoint"
                    },
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
```

```
                {
                  "ref": "Region"
                }
              ],
              "assign": "PartitionResult"
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {

                  "ref": "UseFIPS"
                    },
                    true
                  ]
                },
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }

],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"

        },
                          "supportsFIPS"
                        ]
                      }
```

```
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  true,
                  {
                    "fn": "getAttr",
                    "argv": [

                     {
                          "ref": "PartitionResult"
                      },
                      "supportsDualStack"
                    ]
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [],

      "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }
                ],

            "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                "type": "error"
              }
            ],
```

```
                "type": "tree"
            },
            {

        "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

                "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                        "headers": {}
```

```
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled
but this partition does not support FIPS",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true

    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {

                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
```

```
                ]
              }
            ],
            "rules": [
              {
                "conditions": [],
                "rules": [

        {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                          "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
                      }
                    ],
                    "type": "tree"

                }
                    ],
                    "type": "tree"
                  },
                  {
                    "conditions": [],
                    "error": "DualStack is enabled but this partition does not support DualStack",
                    "type": "error"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }
                ],
                "type": "tree"
```

```
                    }
                  ],
                  "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "Invalid Configuration: Missing Region",
              "type": "error"
            }
          ],
          "type": "tree"
        }
      ]
    },
    "smithy.rules#endpointTests": {
      "testCases": [
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

      }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
```

```
            "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                  }

        },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                  }
                },
                "params": {
                  "Region": "cn-north-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {

          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                  }
                },
```

```
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }

      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

      },
      "params": {
```

```
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },

    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {

  "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",

                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
```

```
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Instances"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
```

```
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
            <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 16384
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
      "type": "structure",
      "members": {
        "Instances": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListLinuxSubscriptions"
        },
```

```
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "Subscriptions"
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "NextToken
```

```
length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
```

```
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
```

```
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "EQUAL",
                    "value": "Equal",
                    "documentation": "Equal operator"
                },
                {
                    "name": "NOT_EQUAL",
                    "value": "NotEqual",
                    "documentation": "Not equal operator"
```

```
            },
            {
              "name": "CONTAINS",
              "value": "Contains",
              "documentation": "Contains operator"
            }
          ],
          "smithy.api#length": {
            "min": 1,
            "max": 20
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled OrganizationIntegration"
            },
            {

"name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled OrganizationIntegration"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },

           {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
         "type": "structure",
         "members": {
            "SubscriptionProviderSource": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                  "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                  "smithy.api#required": {}
               }
            },
            "SecretArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
               "traits": {

          "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
               }
            }
         },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
```

```
            },
            "SecretArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
               }
            },
            "SubscriptionProviderStatus": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
               }
            },
            "SubscriptionProviderStatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
               }
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {

                  "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
         "type": "structure",
```

```
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "InProgress",
            "value": "InProgress",
            "documentation": "InProgress status"
          },
          {
            "name": "Completed",
            "value": "Completed",
            "documentation": "Completed status"
          },
          {
            "name": "Successful",
            "value": "Successful",
            "documentation": "Successful status"
          },
          {
            "name": "Failed",
            "value": "Failed",
            "documentation": "Failed status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#length": {
                    "min": 1,
                    "max": 100
                }
            }
        },
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            },
            "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the subscription.</p>"
                }
            },
            "Type": {
                "target": "smithy.api#String",
                "traits": {

          "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with
Amazon EC2, Bring Your Own\n        Subscription model (BYOS), or from the Amazon Web Services Marketplace.
Certain subscriptions may use licensing from the\n        Amazon Web Services Marketplace as well as OS licensing
from Amazon EC2 or BYOS.</p>"
                }
            },
            "InstanceCount": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
                "traits": {
                    "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
                }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

     "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
```

```
            {
              "name": "INVALID",
              "value": "INVALID",
              "documentation": "INVALID status"
            },
            {
              "name": "PENDING",
              "value": "PENDING",
              "documentation": "PENDING status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
               "method": "PUT",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
         "type": "structure",
         "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                   "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "tags": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
         "type": "map",
         "key":
{
            "target": "smithy.api#String"
         },
         "value": {
```

```
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
           },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
              "method": "DELETE",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
      "type": "structure",

  "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "tagKeys": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input":
{}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
          }

        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
          }

    },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
          }
        },
        "StatusMessage": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
          "traits": {
            "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
          }
        },
        "HomeRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
          }
         }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
```

```
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses

granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,

any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware

UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.69 kelseyhightower-envconfig 1.4.0

1.69.1 Available under license :

Copyright (c) 2013 Kelsey Hightower

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.

1.70 file 5.46-r2

1.70.1 Available under license :

$File: COPYING,v 1.2 2018/09/09 20:33:28 christos Exp $
Copyright (c) Ian F. Darwin 1986, 1987, 1989, 1990, 1991, 1992, 1994, 1995.
Software written by Ian F. Darwin and others;
maintained 1994- Christos Zoulas.

This software is not subject to any export provision of the United States
Department of Commerce, and may be exported to any country or planet.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice immediately at the beginning of the file, without modification,
  this list of conditions, and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED
WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

1.71 libbsd 0.12.2-r0

1.71.1 Available under license :

Format: https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/

Files:
*
Copyright:
Copyright 2004-2024 Guillem Jover <guillem@hadrons.org>
License: BSD-3-clause

Files:
include/bsd/err.h
include/bsd/stdlib.h
include/bsd/sys/param.h
include/bsd/unistd.h
src/bsd_getopt.c
src/err.c
src/fgetln.c
src/progname.c
Copyright:
Copyright 2005, 2008-2012, 2019 Guillem Jover <guillem@hadrons.org>
Copyright 2005 Hector Garcia Alvarez
Copyright 2005 Aurelien Jarno
Copyright 2006 Robert Millan
Copyright 2018 Facebook, Inc.
License: BSD-3-clause

Files:
include/bsd/netinet/ip_icmp.h
include/bsd/sys/bitstring.h
include/bsd/sys/queue.h
include/bsd/sys/time.h
include/bsd/timeconv.h
include/bsd/vis.h
man/bitstring.3bsd
man/errc.3bsd
man/explicit_bzero.3bsd
man/fgetln.3bsd
man/fgetwln.3bsd
man/fpurge.3bsd
man/funopen.3bsd
man/getbsize.3bsd
man/heapsort.3bsd
man/nlist.3bsd
man/pwcache.3bsd
man/queue.3bsd

man/radixsort.3bsd
man/reallocarray.3bsd
man/reallocf.3bsd
man/setmode.3bsd
man/strmode.3bsd
man/strnstr.3bsd
man/strtoi.3bsd
man/strtou.3bsd
man/unvis.3bsd
man/vis.3bsd
man/wcslcpy.3bsd
src/getbsize.c
src/heapsort.c
src/merge.c
src/nlist.c
src/pwcache.c
src/radixsort.c
src/setmode.c
src/strmode.c
src/strnstr.c
src/strtoi.c
src/strtou.c
src/unvis.c
Copyright:
Copyright 1980, 1982, 1986, 1989-1994
The Regents of the University of California. All rights reserved.
Copyright 1992 Keith Muller.
Copyright 2001 Mike Barcroft <mike@FreeBSD.org>
.
Some code is derived from software contributed to Berkeley by
the American National Standards Committee X3, on Information
Processing Systems.
.
Some code is derived from software contributed to Berkeley by
Peter McIlroy.
.
Some code is derived from software contributed to Berkeley by
Ronnie Kon at Mindcraft Inc., Kevin Lew and Elmer Yglesias.
.
Some code is derived from software contributed to Berkeley by
Dave Borman at Cray Research, Inc.
.
Some code is
derived from software contributed to Berkeley by
Paul Vixie.
.
Some code is derived from software contributed to Berkeley by
Chris Torek.

.
Copyright UNIX System Laboratories, Inc.
All or some portions of this file are derived from material licensed
to the University of California by American Telephone and Telegraph
Co. or Unix System Laboratories, Inc. and are reproduced herein with
the permission of UNIX System Laboratories, Inc.
License: BSD-3-clause-Regents

Files:
src/vis.c
Copyright:
Copyright 1989, 1993
    The Regents of the University of California. All rights reserved.
.
Copyright 1999, 2005 The NetBSD Foundation, Inc.
All rights reserved.
License: BSD-3-clause-Regents and BSD-2-clause-NetBSD

Files:
include/bsd/libutil.h
Copyright:
Copyright 1996 Peter Wemm <peter@FreeBSD.org>.
All rights reserved.
Copyright 2002 Networks Associates Technology, Inc.
All rights reserved.
License: BSD-3-clause-author

Files:
man/timeradd.3bsd
Copyright:
Copyright
  2009 Jukka Ruohonen <jruohonen@iki.fi>
Copyright 1999 Kelly Yancey <kbyanc@posi.net>
All rights reserved.
License: BSD-3-clause-John-Birrell
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
3. Neither the name of the author nor the names of any co-contributors
   may be used to endorse or promote products derived from this software
   without specific prior written permission.
.
THIS SOFTWARE IS PROVIDED BY JOHN BIRRELL AND CONTRIBUTORS ``AS IS" AND

ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Files:
man/setproctitle.3bsd
Copyright:
Copyright 1995 Peter Wemm <peter@FreeBSD.org>
All rights reserved.
License: BSD-5-clause-Peter-Wemm
Redistribution and use in source and binary forms, with or without
modification, is permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
notice immediately at the beginning of the file, without
modification,
this list of conditions, and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. This work was done expressly for inclusion into FreeBSD. Other use
is permitted provided this notation is included.
4. Absolutely no warranty of function or purpose is made by the author
Peter Wemm.
5. Modifications may be freely made to this file providing the above
conditions are met.

Files:
include/bsd/stringlist.h
man/arc4random.3bsd
man/fmtcheck.3bsd
man/humanize_number.3bsd
man/stringlist.3bsd
man/timeval.3bsd
src/fmtcheck.c
src/humanize_number.c
src/stringlist.c
src/strtonum.c
Copyright:
Copyright 1994, 1997-2000, 2002, 2008, 2010, 2014

The NetBSD Foundation, Inc.
Copyright 2013 John-Mark Gurney <jmg@FreeBSD.org>
All rights reserved.
.
Copyright 2014
The NetBSD Foundation, Inc.
All rights reserved.
.
Some code was derived from software contributed to The NetBSD Foundation
by Taylor R. Campbell.
.
Some code was contributed to The NetBSD Foundation by Allen Briggs.
.
Some code was contributed to The NetBSD Foundation by Luke Mewburn.
.
Some code is derived from software contributed to The NetBSD Foundation
by Jason R. Thorpe of the Numerical Aerospace Simulation Facility,
NASA Ames Research Center, by Luke Mewburn and by Tomas Svensson.
.
Some code is derived from software contributed to The NetBSD Foundation
by Julio M. Merino Vidal, developed as part of Google's Summer of Code
2005 program.
.
Some code is derived from software contributed to The NetBSD Foundation
by Christos Zoulas.
.
Some code is derived from software contributed to The NetBSD Foundation
by Jukka Ruohonen.
License: BSD-2-clause-NetBSD

Files:
include/bsd/sys/endian.h
man/byteorder.3bsd
man/closefrom.3bsd
man/expand_number.3bsd
man/flopen.3bsd
man/getpeereid.3bsd
man/pidfile.3bsd
src/expand_number.c
src/pidfile.c
src/reallocf.c
src/timeconv.c
Copyright:
Copyright 1998, M. Warner Losh <imp@freebsd.org>
All rights reserved.
.
Copyright 2001 Dima Dorfman.
All rights reserved.

.
Copyright 2001 FreeBSD Inc.
All rights reserved.
.
Copyright 2002 Thomas Moestl <tmm@FreeBSD.org>
All rights reserved.
.
Copyright 2002 Mike Barcroft <mike@FreeBSD.org>
All rights reserved.
.
Copyright 2005 Pawel Jakub Dawidek <pjd@FreeBSD.org>
All rights reserved.
.
Copyright 2005 Colin Percival
All rights reserved.
.
Copyright 2007 Eric Anderson <anderson@FreeBSD.org>
Copyright 2007 Pawel Jakub Dawidek <pjd@FreeBSD.org>
All rights reserved.
.
Copyright 2007 Dag-Erling Codan Smrgrav
All rights reserved.
.
Copyright 2009 Advanced Computing Technologies LLC
All rights reserved.
.
Copyright 2011 Guillem Jover <guillem@hadrons.org>
License: BSD-2-clause

Files:
src/flopen.c
Copyright:
Copyright 2007-2009
 Dag-Erling Codan Smrgrav
All rights reserved.
License: BSD-2-clause-verbatim
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer
   in this position and unchanged.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
.
THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE

IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING,
BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Files:
include/bsd/sys/tree.h
man/fparseln.3bsd
man/tree.3bsd
src/fparseln.c
Copyright:
Copyright 1997 Christos Zoulas.
All rights reserved.
.
Copyright 2002 Niels Provos <provos@citi.umich.edu>
All rights reserved.
License: BSD-2-clause-author

Files:
include/bsd/readpassphrase.h
man/readpassphrase.3bsd
man/strlcpy.3bsd
man/strtonum.3bsd
src/arc4random.c
src/arc4random_linux.h
src/arc4random_uniform.c
src/arc4random_unix.h
src/arc4random_win.h
src/closefrom.c
src/freezero.c
src/getentropy_aix.c
src/getentropy_bsd.c
src/getentropy_hpux.c
src/getentropy_hurd.c
src/getentropy_linux.c
src/getentropy_osx.c
src/getentropy_solaris.c
src/getentropy_win.c
src/readpassphrase.c
src/reallocarray.c
src/recallocarray.c
src/strlcat.c

src/strlcpy.c
test/explicit_bzero.c
test/strtonum.c
Copyright:
Copyright 2004 Ted Unangst and Todd Miller
All rights reserved.
.
Copyright 1996 David Mazieres <dm@uun.org>
Copyright 1998, 2000-2002, 2004-2005, 2007, 2010, 2012-2015
   Todd C. Miller <Todd.Miller@courtesan.com>
Copyright 2004 Ted Unangst
Copyright 2004 Otto Moerbeek <otto@drijf.net>
Copyright 2008 Damien Miller <djm@openbsd.org>
Copyright 2008, 2010-2011, 2016-2017 Otto Moerbeek <otto@drijf.net>
Copyright 2013 Markus Friedl <markus@openbsd.org>
Copyright 2014 Bob Beck <beck@obtuse.com>
Copyright 2014 Brent Cook <bcook@openbsd.org>
Copyright 2014 Pawel Jakub Dawidek <pjd@FreeBSD.org>
Copyright 2014 Theo de Raadt <deraadt@openbsd.org>
Copyright 2014 Google Inc.
Copyright 2015 Michael Felt <aixtools@gmail.com>
Copyright 2015, 2022 Guillem Jover <guillem@hadrons.org>
License:
 ISC
Permission to use, copy, modify, and distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.
.
THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Files:
src/inet_net_pton.c
Copyright:
Copyright 1996 by Internet Software Consortium.
License: ISC-Original
Permission to use, copy, modify, and distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice
 and this permission notice appear in all copies.
.
THE SOFTWARE IS PROVIDED "AS IS" AND INTERNET SOFTWARE CONSORTIUM DISCLAIMS
ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES

OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL INTERNET SOFTWARE CONSORTIUM BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Files:
src/setproctitle.c
Copyright:
Copyright 2010 William Ahern
Copyright 2012 Guillem Jover <guillem@hadrons.org>
License: Expat
Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute,
 sublicense, and/or sell copies of the Software, and to permit
persons to whom the Software is furnished to do so, subject to the
following conditions:
.
The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.
.
THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN
NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE
USE OR OTHER DEALINGS IN THE SOFTWARE.

Files:
src/explicit_bzero.c
src/chacha_private.h
Copyright:
None
License: public-domain
Public domain.

Files:
man/mdX.3bsd
Copyright:
None
License: Beerware
"THE BEER-WARE LICENSE" (Revision 42):
<phk@login.dkuug.dk> wrote this

file. As long as you retain this notice you
can do whatever you want with this stuff. If we meet some day, and you think
this stuff is worth it, you can buy me a beer in return. Poul-Henning Kamp

License: BSD-3-clause-Regents
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
3. Neither the name of the University nor the names of its contributors
   may be used to endorse or promote products derived from this software
   without specific prior written permission.
.
THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

License: BSD-3-clause-author
Redistribution and use in source and binary forms, with or without
modification, is permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions
 in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote
   products derived from this software without specific prior written
   permission.
.
THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL

DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

License: BSD-3-clause
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote products
derived from this software without specific prior written permission.
.
THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY
AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL
THE
AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS;
OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF
ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

License: BSD-2-clause-NetBSD
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
.
THIS SOFTWARE IS PROVIDED BY THE NETBSD FOUNDATION, INC. AND CONTRIBUTORS
``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED
TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE FOUNDATION OR CONTRIBUTORS
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF

SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

License: BSD-2-clause-author
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above
 copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
.
THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
 DAMAGE.

License: BSD-2-clause
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
.
THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE,
 DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT

LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.72 github.com/aws/aws-sdk-go-v2/credentials 1.18.10

1.72.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

```
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
```

```
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string

 // Product name.
 //
 // This member is required.
 ProductName *string

 // Product SKU.
```

```
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
```

```
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

```
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
```

```
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
return &awsmiddleware.RegisterServiceMetadata{
 Region:       region,
 ServiceID:    ServiceID,
 OperationName: "ListReceivedLicenses",
}
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
              "target": "smithy.api#String"
           }
        },
        "traits": {
           "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
           "smithy.api#error": "client"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
           "DirectoryId": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
            "traits": {
              "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
            }
          },
          "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
```

```
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
```

```
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
                  "smithy.api#required": {}
               }
            },
             "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
               }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
```

```
        },
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
```

```
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}

      }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Directory": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
```

```
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary":
{
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
         "type": "structure",
         "members": {
            "Subnets": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
               "traits": {
                  "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                  "smithy.api#length": {
                     "min": 1
                  },
```

```
    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
```

```
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
    "type": "structure",
    "members": {
        "Username": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

"IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
```

```
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
               }
            },
            "AssociationDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
               }
            },
            "DisassociationDate": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
         "type": "list",
```

```
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
```

```
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

          "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
```

```
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
             ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [
                  {

                    "fn": "booleanEquals",
                    "argv": [
                      {
```

```
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "aws.partition",

                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

true

```
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
```

"fn": "booleanEquals",

```
                            "argv": [
                              true,
                              {
                                "fn": "getAttr",
                                "argv": [
                                  {
                                    "ref": "PartitionResult"
                                  },
                                  "supportsFIPS"
                                ]
                              }
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              true,
```

```
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }

    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [

 {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
```

```
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [

{
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {

"url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {

        "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]

          }
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }

            ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
```

```
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect":
{
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",

    "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
                "UseFIPS":
true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": false,
                 "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
```

```
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
 false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
 disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
```

```
                }
              },
              {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "Missing region",
                "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
              "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
                }
            },
            "LicenseServers": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
                "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
                }
            },
            "CreationTime": {
                "target": "smithy.api#Timestamp",
                "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                "name": "PROVISIONING",
                "value": "PROVISIONING",
```

```
            "documentation": ""
          },
          {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
          },
          {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
       "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
```

```
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
          "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
</li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
              }
            },
             "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
```

```
            }
          },
          "NextToken":
{
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/license-server/ListLicenseServerEndpoints"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "LicenseServerEndpoints"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
      "type": "structure",
      "members": {
```

```
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                  "smithy.api#range": {
                     "min": 1,
                     "max": 100
                  }
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

     "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
          },
          "errors": [
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListUserAssociations"
             },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "InstanceUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
```

```
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

        }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
```

```
 "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

          "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
              "target": "smithy.api#String",
              "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
              }
            },
            "SubscriptionEndDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
          "type": "structure",
          "members": {
            "RdsSalCredentialsProvider": {
```

```
        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
           }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
```

```
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
```

```
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",

        "traits": {
              "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
              "smithy.api#length": {
                "min": 1
              }
            }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
              "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
          "type": "structure",
          "members": {
            "Endpoint": {

           "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
          "type": "union",
          "members": {
            "RdsSalSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },
```

```
        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
             "traits": {
               "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/StopProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "ProductUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
```

```
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                "smithy.api#httpLabel": {},
```

```
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
    "type": "structure",
    "members": {},
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#Tags": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    },
    "traits": {
        "smithy.api#length": {
            "min": 0,
            "max": 50
        },
        "smithy.api#sensitive": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
```

```
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                     "smithy.api#required": {}
                }
```

```
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
```

```
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
```

```
        }
      }
    }
  }
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
```

```
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
```

```
//
//   - Status
Filters
[]types.Filter

// Amazon Resource Names (ARNs) of the licenses.
LicenseArns []string

// Maximum number of results to return in a single call.
MaxResults *int32

// Token for the next set of results.
NextToken *string

noSmithyDocumentSerde
}

type ListLicensesOutput struct {

// License details.
Licenses []types.License

// Token for the next set of results.
NextToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
```

```
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
```

```
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
```

```
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
```

```
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
```

```
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
```

```
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
```

```
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
```

```
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
```

```
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
```

```
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
```

```
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
```

```
//
// This member is required.
Workspace *types.WorkspaceDescription

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string
```

```
 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
```

```
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
```

```
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
```

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR

```
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string
```

```
 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
```

```
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
```

```
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
```

```
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
```

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

           "traits": {
                "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
              }
```

```
            },
            "SubscriptionProviderStatus": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
               "traits": {
                  "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
               }
            },
            "SubscriptionProviderStatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
               }
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
         "type": "operation",
         "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
```

```
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
          "type": "structure",
          "members": {}
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
              }
            },
            "Status": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
              }
            },
            "StatusMessage": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
              "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
              }
            },
            "HomeRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
```

```
            "target": "smithy.api#String",

    "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
              "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
          },
          "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
          "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
            }
          },
          "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
```

```
registered \n\t\t\tthird-party Linux subscription provider.</p>"
                }
            },
            "DualSubscription": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
                }
            },
            "RegisteredWithSubscriptionProvider": {
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
         },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
```

```
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
```

```
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }

        ],
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {
                              "ref": "UseDualStack"
                            },
                            true
                          ]

}
                      ],
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                      "type": "error"
                    },
                    {
                      "conditions": [],
                      "endpoint": {
```

```
                "url": {
                  "ref": "Endpoint"
                },
                "properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ],
          "type": "tree"

      }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "rules": [
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Region"
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {

      "fn": "aws.partition",
                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
```

```
                "argv": [
                  {

              "ref": "UseFIPS"
                  },
                  true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }

],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"

        },
                              "supportsFIPS"
                          ]
                        }
                      ]
                    },
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [

                           {
                                "ref": "PartitionResult"
```

```
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {

        "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
                            true
```

```
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

          "fn": "booleanEquals",
                      "argv": [
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        },
                        true

                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [
                      {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
                      }
                    ],
                    "type": "tree"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS is enabled
```

```
but this partition does not support FIPS",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseDualStack"
                                        },
                                        true

                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [
                                                        {

                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
```

```
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"

                            }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
```

```
        ],
        "type": "tree"
      }
    ]
  },
  "smithy.rules#endpointTests": {
    "testCases": [
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

    }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {

     "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
```

```
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                }

        },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
```

```
    },
    "params": {
      "Region": "cn-north-1",
      "UseFIPS": false,
      "UseDualStack": true
    }
  },
  {
    "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
      }
    },
    "params": {
      "Region": "cn-north-1",
      "UseFIPS": false,
      "UseDualStack": false
    }
  },
  {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
      }
    },
    "params": {
      "Region": "us-gov-east-1",
      "UseFIPS": true,
      "UseDualStack": true
    }
  },
  {
    "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
      }

   },
    "params": {
      "Region": "us-gov-east-1",
      "UseFIPS": true,
      "UseDualStack": false
    }
  },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }

                },
                  "params": {
                    "Region": "us-iso-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
                    }
                  },
```

```
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
```

```
        {
                "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://example.com"
                  }
                },
                "params": {
                  "UseFIPS": false,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {

          "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "Missing region",

              "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
```

```
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
              "name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
```

```
<li>\n <p>\n <code>DualSubscription</code>\n </p>\n </li>\n
<li>\n <p>\n <code>InstanceID</code>\n </p>\n </li>\n <li>\n
<p>\n <code>InstanceType</code>\n </p>\n </li>\n <li>\n <p>\n
<code>ProductCode</code>\n </p>\n </li>\n <li>\n <p>\n
<code>Region</code>\n </p>\n </li>\n <li>\n <p>\n
<code>Status</code>\n </p>\n </li>\n <li>\n <p>\n
<code>UsageOperation</code>\n </p>\n </li>\n </ul>\n <p>For each filter, you can use
one of the following <code>Operator</code> values to \n \t\tdefine the behavior of the filter:</p>\n <ul>\n
<li>\n <p>\n <code>contains</code>\n </p>\n </li>\n <li>\n
<p>\n <code>equals</code>\n </p>\n </li>\n <li>\n
<p>\n <code>Notequal</code>\n </p>\n </li>\n </ul>"
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 16384
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
      "type": "structure",
      "members": {
        "Instances": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
```

```
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

        "traits": {
            "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
            "smithy.api#length": {
              "min": 1,
              "max": 16384
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSources": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

  "traits": {
            "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
            "smithy.api#range": {
              "min": 1,
              "max": 100
            }
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
          }
        }
      },

      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
```

isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects. "
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": " List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource. ",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": " The Amazon Resource Name (ARN) of the resource for which to list metadata tags. ",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

```
        }
      }
    },
    "traits": {
      "smithy.api#input": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
            },
            {

"name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
             "traits": {
               "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
               "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
               "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
               "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
```

```
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
```

```
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {

                    "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
```

```
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "InProgress",
                "value": "InProgress",
                "documentation": "InProgress status"
              },
              {
                "name": "Completed",
                "value": "Completed",
                "documentation": "Completed status"
              },
              {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
              },
              {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#length": {
                "min": 1,
                "max": 100
              }
            }
          },
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            },
            "smithy.api#uniqueItems": {}
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
      "target": "smithy.api#String"
    },
    "value": {
      "target": "smithy.api#String"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
    "type": "structure",
    "members": {
      "Name": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The name of the subscription.</p>"
        }
      },
      "Type": {
        "target": "smithy.api#String",
        "traits": {

   "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
        }
      },
      "InstanceCount": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
        "traits": {
          "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
    "type": "list",

   "member": {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
    }
  },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
```

```
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

  "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
```

```
            "tagKeys": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input":
 {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/UpdateServiceSettings"
```

```
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
```

settings include if Organizations\n integration has been enabled, and which Regions data will be aggregated from. "
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": " Indicates the status of Linux subscriptions settings being applied. "
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": " A message which details the Linux subscriptions service settings current status. "
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": " The Region in which License Manager displays the aggregated data for Linux\n subscriptions. "
                }
             }
          }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
              "message": {
                  "target": "smithy.api#String"
              }
          },
          "traits": {
              "smithy.api#documentation": " The provided input is not valid. Try your request again. ",
              "smithy.api#error": "client"
          }
      }
  }
}

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner

or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices

stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions

InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2

disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.73 google-uuid 1.6.0

1.73.1 Available under license :

Paul Borman <borman@google.com>
bmatsuo
shawnps
theory
jboverfelt
dsymonds
cd1
wallclockbuilder
dansouza
Copyright (c) 2009,2014 Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.74 x-text 0.28.0

1.74.1 Available under license :

Copyright 2009 The Go Authors.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
* Neither the name of Google LLC nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.75 aws-sdk-go-v2-service-ssooidc 1.34.2

1.75.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper

```
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
```

```
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options)) (*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns, c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
```

```
Beneficiary *string

// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
//
This member is required.
ClientToken *string

// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
```

```
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
```

```
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
```

```
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
```

OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart

setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger

```
 OperationInputValidation
 spanInitializeEnd
Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
{
  "smithy": "2.0",
  "shapes": {
```

```
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
      "members": {
        "DomainName": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
        },
        "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                "smithy.api#length": {
                    "min": 1,
                    "max": 2
                }
            }
        },
        "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
        },
        "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "SELF_MANAGED",
                "value": "SELF_MANAGED",
                "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
                "name": "AWS_MANAGED",
```

```
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Arn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related
```

costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as Pending billing status) in Amazon Web Services Billing. For more information, see Viewing your\n\t\t\t\tmonthly charges in the Amazon Web Services Billing User Guide. \n </note>",
"smithy.api#http":
{
"code": 200,
"method": "POST",
"uri": "/user/AssociateUser"
},
"smithy.api#idempotent": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
"type": "structure",
"members": {
"Username": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The user name from the identity provider. ",
"smithy.api#required": {}
}
},
"InstanceId": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The ID of the EC2 instance that provides the user-based subscription. ",
"smithy.api#required": {}
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " The identity provider for the user. ",
"smithy.api#required": {}
}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains information for the user to associate. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
"traits": {

```
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
               }
            },
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
         "type": "union",
         "members": {
            "SecretsManagerCredentialsProvider":
```

```
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
          "smithy.api#http": {
```

```
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
                }
            }
        },
         "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
```

```
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
             "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
```

```
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
```

```
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
          "type": "union",
          "members": {
            "ActiveDirectoryIdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Settings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
```

```
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },

      "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
               }
            },
            "AssociationDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
```

```
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
```

```
"operations": [
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
    },
    {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
```

```
        },
        {

  "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

       "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
```

```
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
            },
            "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
            },
            "UseFIPS": {
                "builtIn": "AWS::UseFIPS",
                "required": true,
                "default": false,
                "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                "type": "Boolean"
            },
            "Endpoint": {
                "builtIn": "SDK::Endpoint",
                "required": false,
                "documentation": "Override the endpoint used to send this request",
                "type": "String"
            }
        },
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "isSet",
                        "argv": [
                            {
                                "ref": "Endpoint"
                            }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
```

```
                        {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
                }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
        },
        {
            "conditions": [
                {

                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": {
                    "ref": "Endpoint"
                },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "isSet",
                "argv": [
                    {
                        "ref": "Region"
```

```
                }
            ]
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "aws.partition",

                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ],
                    "assign": "PartitionResult"
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },

true
                            ]
                        },
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {

"fn": "booleanEquals",
                                    "argv": [
```

```
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        }
                      ]
                    },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

              ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }

  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "FIPS and DualStack are enabled, but this partition does not support one or
```

```
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [

 {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [

        {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

          "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
```

```
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

    "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

     }
                            ]
                        }
                    ],
                    "rules": [
```

```
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }

                                ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                        "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
```

```
                {
                  "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                  "expect":
{
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",

        "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                    }
```

```
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
```

```
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
         "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
 false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
```

```
                "params": {
                  "UseFIPS": false,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                  "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                 }
              },
              {
                "documentation": "Missing region",
                "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "HealthStatus": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
        },
        "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS \n\t\t\tlicense server.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
      "type": "structure",
      "members": {
        "IdentityProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's associated with \n\t\t\tthe RDS license server endpoint.</p>"
          }
        },
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>"
          }
        },
        "ServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
          }
        },
```

```
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
               }
            },
            "LicenseServerEndpointId": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
               }
            },
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
               }
            },
            "LicenseServerEndpointProvisioningStatus": {
               "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
               }
            },
            "LicenseServers": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
               }
            },
            "CreationTime": {
               "target": "smithy.api#Timestamp",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
         }
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
   "type": "string"
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
```

```
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
       "traits": {
         "smithy.api#enum": [
           {
             "name": "HEALTHY",
             "value": "HEALTHY",
             "documentation": ""
           },
           {
             "name": "UNHEALTHY",
             "value": "UNHEALTHY",
             "documentation": ""
           },
           {
             "name": "NOT_APPLICABLE",
             "value": "NOT_APPLICABLE",
             "documentation": ""
           }
         ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
         "ServerType": {
           "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
           "traits": {
             "smithy.api#documentation": "<p>The type of license server.</p>",
             "smithy.api#required": {}
           }
         },
         "ServerSettings": {
           "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
           "traits": {
             "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
             "smithy.api#required": {}
           }
         }
      },
      "traits": {
```

```
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n              <p>Product</p>\n            </li>\n            <li>\n              <p>DirectoryId</p>\n
</li>\n          </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
              }
            },
             "NextToken": {
              "target": "smithy.api#String",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
```

```
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "InstanceSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
               }
            },
            "NextToken":
 {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>Status</p>\n            </li>\n            <li>\n               <p>InstanceId</p>\n
</li>\n         </ul>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
         "type": "structure",
          "members": {
            "InstanceSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
```

```
criteria.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output":
 {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
```

```
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "LicenseServerEndpoints"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                  "smithy.api#range": {
                     "min": 1,
                     "max": 100
                  }
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
                "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
```

```
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
                }
            },
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
         "type": "structure",

       "members": {
            "ProductUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
         "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/ListUserAssociations"
```

```
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceUserSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
          }
        },
        "Filters": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n      <li>\n      <p>Status</p>\n      </li>\n      <li>\n      <p>Username</p>\n
</li>\n      <li>\n      <p>Domain</p>\n      </li>\n      </ul>"

      }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
```

```
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
                }
            },
            "NextToken": {
                "target":
 "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

          "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
```

```
            }
        },
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                "smithy.api#required": {}
            }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
        },
        "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
        },
        "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
            "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                  "smithy.api#required": {}
               }
            },

        "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                  "smithy.api#required": {}
               }
            },
            "Settings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration \n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
          "type": "structure",
          "members": {
            "SecretId": {
              "target": "smithy.api#String",

          "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
              "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
          "type": "structure",
          "members": {
            "Endpoint": {

         "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
```

```
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                    "smithy.api#required": {}

                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to start the product \n\t\t\tsubscription.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
```

```
            },
            "Product": {
               "target": "smithy.api#String",
                "traits": {
                   "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "ProductUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
               }
             }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
         "type": "list",
         "member": {
            "target": "smithy.api#String"
```

```
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
               "method": "PUT",
               "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
         "members": {
            "ResourceArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
         "type": "map",
         "key": {
            "target": "smithy.api#String"
         },
         "value": {
            "target": "smithy.api#String"
```

```
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
```

```
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "TagKeys": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
              "smithy.api#httpQuery": "tagKeys",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
          "type": "structure",
          "members": {
            "IdentityProviderSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
              "traits": {
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
          "type": "structure",
          "members": {
            "AddSubnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
                "smithy.api#required":
{}
              }
            },
            "RemoveSubnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
              }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
      }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
  - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
```

```
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
```

```
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
```

DeleteLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

```
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
```

```
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
```

```
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:
      region,
 ServiceID:     ServiceID,
 OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType
```

```
// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
// This member is required.
ClientToken *string

// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string
```

```
// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
```

```
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
```

```
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData
```

```
// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
```

```
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
```

```
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
```

```
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
```

```
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
```

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER

```
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
```

```
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
```

InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
```

```
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

        },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
```

```
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",
```

```
   "traits": {
                    "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
                }
            },
            "ProductCode": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
               "traits": {
                  "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
               }
            },
            "LastUpdatedTime": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
               }
            },
            "SubscriptionName": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
               }
            },
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
```

```
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for \n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
     },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
       "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
```

```
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
```

```
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }

        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]

}
                    ],
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                    "type": "error"
                  },
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": {
                        "ref": "Endpoint"
```

```
                    },
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
```

```
                "ref": "UseFIPS"
                    },
                    true
                ]
                },
                {
                "fn": "booleanEquals",
                "argv": [
                    {
                    "ref": "UseDualStack"
                    },
                    true
                ]
                }

    ],
                "rules": [
                {
                "conditions": [
                    {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                        "fn": "getAttr",
                        "argv": [
                            {
                            "ref": "PartitionResult"

            },
                            "supportsFIPS"
                        ]
                        }
                    ]
                    },
                    {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                        "fn": "getAttr",
                        "argv": [

                        {
                            "ref": "PartitionResult"
                        },
                        "supportsDualStack"
```

```
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {

        "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {

                "fn": "booleanEquals",
                        "argv": [
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          },
                          true

                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "rules": [
                        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                            "headers": {}
                          },
                          "type": "endpoint"
                        }
                      ],
                      "type": "tree"
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "FIPS is enabled
but this partition does not support FIPS",
                  "type": "error"
```

```
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true

    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {

                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

{
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
```

```
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
],
"type": "tree"
```

```
      }
    ]
  },
  "smithy.rules#endpointTests": {
    "testCases": [
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

    }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {

     "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
```

```
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                    }

            },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                }
            },
            {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                    }
                 },
                "params": {
```

```
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
        },
        "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

     },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
```

```
        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

        "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "Missing region",

          "expect": {
              "error": "Invalid Configuration: Missing Region"
            }
          }
        ],
        "version": "1.0"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
          <li>\n              <p>\n                <code>DualSubscription</code>\n              </p>\n            </li>\n
```

\n \n <code>InstanceID</code>\n \n \n \n \n <code>InstanceType</code>\n \n \n \n \n <code>ProductCode</code>\n \n \n \n \n <code>Region</code>\n \n \n \n \n <code>Status</code>\n \n \n \n \n <code>UsageOperation</code>\n \n \n \n For each filter, you can use one of the following <code>Operator</code> values to \n \t\tdefine the behavior of the filter: \n \n \n \n <code>contains</code>\n \n \n \n \n <code>equals</code>\n \n \n \n \n <code>Notequal</code>\n \n \n "
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": " The maximum items to return in a request. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response. ",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": " An array that contains instance objects. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The next token used for paginated responses. When this \n\tfield

isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional
objects. "
}
}
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
},
"errors": [
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
},
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
},
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
}
],
"traits": {
"smithy.api#documentation":
" Lists the Linux subscriptions that have been discovered. If you have linked your\n organization, the returned results will include data aggregated across your accounts in\n Organizations. ",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/subscription/ListLinuxSubscriptions"
},
"smithy.api#idempotent": {},
"smithy.api#paginated": {
"inputToken": "NextToken",
"outputToken": "NextToken",
"pageSize": "MaxResults",
"items": "Subscriptions"
}
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
"type": "structure",
"members": {
"Filters": {

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
              "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
```

```
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
```

```
the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
```

```
        }
      }
    },
    "traits": {
      "smithy.api#input": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
```

```
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

            "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
```

\n\t\t\tthis is the status of the offline token. "
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
            }
          }
        },
        "traits": {
          "smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": " Unable to find the requested Amazon Web Services resource. ",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-

```
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
            },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            }
          }
        },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          },
          "smithy.api#uniqueItems": {}
        }
```

```
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
   "type": "map",
   "key": {
      "target": "smithy.api#String"
   },
   "value": {
      "target": "smithy.api#String"
   }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
   "type": "structure",
   "members": {
      "Name": {
         "target": "smithy.api#String",
         "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
         }
      },
      "Type": {
         "target": "smithy.api#String",
         "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
         },
         "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
               "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
         }
      },
      "traits": {
         "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
   },
   "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

    "member": {
         "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
   },
   "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
```

```
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
```

```
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
{}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
```

```
from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
             }
          }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
              "message": {
                  "target": "smithy.api#String"
              }
          },
          "traits": {
              "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
              "smithy.api#error": "client"
          }
      }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or

agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning

Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.76 aws-sdk-go-v2-service-internal-presigned-url 1.13.6

1.76.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

```
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
  name: License Scan
  runs-on: ubuntu-latest
  strategy:
   matrix:
    python-version: [3.9]

  steps:
   - name: Checkout target
    uses: actions/checkout@v2
    with:
     path: sdkbase
     ref: ${{ github.base_ref }}
   - name: Checkout this ref
```

```
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }} ${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
```

```
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
```

```
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
```

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
```

\n\t\t\taddresses, and the credential provider for user administration. "
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": " The type of Active Directory either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory. "
            }
          }
        },
        "traits": {
          "smithy.api#documentation": " Details about an Active Directory identity provider. "
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The domain name for the Active Directory. "
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": " A list of domain IPv4 addresses that are used for the Active Directory. ",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": " Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration. "
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": " The <code>DomainNetworkSettings</code> resource contains an

```
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n          <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http":
{
            "code": 200,
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
```

```
subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
            }
        },
        "traits": {

    "smithy.api#input": {}
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
     },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

      {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
                "smithy.api#required": {}
              }
            },
            "LicenseServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
         ],
         "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#output": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
```

```
information for the user to disassociate.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },

   "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
```

```
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
             "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
                }
            },
            "FailureMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },

    "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
```

```
user.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
                }
            },
            "AssociationDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
                }
            },
            "DisassociationDate": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
```

```
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",
```

```
          "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
              "UseFIPS": {
                "builtIn": "AWS::UseFIPS",
                "required": true,
                "default": false,
                "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                "type": "Boolean"
              },
              "Endpoint": {
                "builtIn": "SDK::Endpoint",
                "required": false,
                "documentation": "Override the endpoint used to send this request",
```

```
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [
              {

                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
```

```
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                   "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

```
true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
```

```
                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
```

```
                    "argv": [

                {
                        "ref": "PartitionResult"
                    },
                    "supportsFIPS"
                ]
                },
                true
            ]
            }
        ],
        "rules": [
            {
            "conditions": [],
            "endpoint": {

    "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                "properties": {},
                "headers": {}
            },
            "type": "endpoint"
            }
        ],
        "type": "tree"
        },
        {
        "conditions": [],
        "error": "FIPS is enabled but this partition does not support FIPS",
        "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [
                {
                    "ref": "UseDualStack"
                },
                true
                ]
            }
            ],
            "rules": [
```

```
                {

        "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]

        }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }

                ],
                    "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
```

```
                "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "error": "Invalid Configuration: Missing Region",
      "type": "error"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",

    "UseFIPS": true,
        "UseDualStack": false
      }
```

```
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
 true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                     "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }
                  },
```

```
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
```

```
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
                }
            },
            "LicenseServerEndpointId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
```

```
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
```

```
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
       "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
           "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "InstanceSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
               }
            },
            "NextToken":
 {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
               }
            },
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>InstanceId</p>\n
</li>\n       </ul>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
         "type": "structure",
          "members": {
            "InstanceSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
 {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
```

```
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
         },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
```

```
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
"<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

         "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
```

```
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
```

```
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
     },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
       }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/identity-provider/RegisterIdentityProvider"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
    "type": "structure",
    "members": {
      "IdentityProvider": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to register.</p>",
                "smithy.api#required": {}
            }
        },

    "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration \n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
```

```
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
          "smithy.api#http":
```

```
{
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/identity-provider/UpdateIdentityProviderSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
      "type": "structure",
       "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the identity provider to
update. "
}
},
"UpdateSettings":
{
"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
"traits": {
"smithy.api#documentation": " Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the: \n
\n \n Subnets which you want to add to provision VPC endpoints. \n \n
\n Subnets which you want to remove the VPC endpoints from. \n \n
\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
```

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32
```

```
 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
```

```
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
```

```
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
```

```
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
```

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

```
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}
```

```
type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
```

```
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
```

```
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
```

```
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
```

```
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
```

```
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
```

```
c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
```

```
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
```

```
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
```

```
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
```

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
```

```
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
```

InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
```

```
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
           "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of name to filter by.</p>"
           }
        },
        "Values": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
          }
        },
        "Operator": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
          "traits": {
            "smithy.api#documentation": "<p>An operator for filtering results.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

        "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
```

```
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
```

```
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
              "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
          },
          "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
```

```
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

     "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
      "type": "service",
      "version": "2018-05-10",
      "operations": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
         },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
                 "type": "Boolean"
              },
```

```
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }

        ],
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [],
                  "rules": [
                    {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"

        }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
```

```
                {
                  "conditions": [
                    {

            "fn": "aws.partition",
                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {

                        "ref": "UseFIPS"
                            },
                            true
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {
                              "ref": "UseDualStack"
                            },
                            true
                          ]
                        }

],
                      "rules": [
                        {
                          "conditions": [
                            {
                              "fn": "booleanEquals",
                              "argv": [
                                true,
                                {
                                  "fn": "getAttr",
                                  "argv": [
                                    {
```

```
                                        "ref": "PartitionResult"

                    },
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [

                                     {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {

      "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

            "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [
                      {
                        "conditions": [],
```

```
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled
but this partition does not support FIPS",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true

                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
```

```
                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

        {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
}
],
"type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
"documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
"expect": {
"endpoint": {
"url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
},
"params": {
"Region": "us-east-1",
"UseFIPS": true,
"UseDualStack": true
}
},
{
"documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
"expect": {
"endpoint": {
"url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
}
},
"params": {
"Region": "us-east-1",
```

```
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {

      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                }

    },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
```

```
"documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                      }
                     },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": true
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {

 "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                      }
                    },
                    "params": {
                      "Region": "us-gov-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

     },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }

        },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },

    {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {

      "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
```

```
                    "expect": {
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                        "Region": "us-east-1",
                        "UseFIPS": false,
                        "UseDualStack": true,
                        "Endpoint": "https://example.com"
                    }
                },
                {
                    "documentation": "Missing region",

                "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
    "type": "structure",
    "members": {
        "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
        "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
            <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
```

```
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional
  objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
```

```
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Subscriptions"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
              },
              "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
              },
              "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                    "min": 1,
                    "max": 16384
```

```
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
          "type": "structure",
          "members": {
            "Subscriptions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
              "traits": {
                "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional objects.</p>"

              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
          "type": "operation",
          "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
          },
          "output": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
          ],
          "traits": {
            "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

     "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
 return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
 nextToken from a previously truncated response.</p>"
              }
            }
          },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
            "RegisteredSubscriptionProviders": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
                "traits": {
                    "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}

              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "EQUAL",
                "value": "Equal",
```

```
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
```

```
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },

         {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
             "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
```

```
        "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
                }
            },
            "SubscriptionProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
```

```
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
      "type": "list",
      "member": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "InProgress",
                "value": "InProgress",
                "documentation": "InProgress status"
               },
              {
                "name": "Completed",
                "value": "Completed",
                "documentation": "Completed status"
              },
              {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
              },
              {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
              }
            ]
```

```
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#length": {
                    "min": 1,
                    "max": 100
                }
            }
        },
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            },
            "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the subscription.</p>"
                }
            },
            "Type": {
                "target": "smithy.api#String",
                "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
                }
```

```
            },
            "InstanceCount": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
               "traits": {
                  "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
         "type": "list",

       "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "RedHat",
                  "value": "RedHat",
                  "documentation": "RedHat subscription provider namespace"
               }
            ]
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
         "type":
 "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
         "type": "string",
         "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
```

```
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
```

```
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
 {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
```

```
Region.</p>"
                }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their

Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf

of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step

ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization

OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.77 brotli 1.1.0-r2

1.77.1 Available under license :

Copyright (c) 2009, 2010, 2013-2016 by the Brotli Authors.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights

to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF
 OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

1.78 github.com/aws/aws-sdk-go-v2/internal/ini 1.8.3

1.78.1 Available under license :

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
```

```
 return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {
```

```
// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err !=
 nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

```
CheckInLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  OperationSerializer
 Build stack step
  ClientRequestID
  ComputeContentLength
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  Retry
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  Signing
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  OperationDeserializer
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
```

```
  runs-on: ubuntu-latest
  strategy:
    matrix:
      python-version: [3.9]

  steps:
    - name: Checkout target
      uses: actions/checkout@v2
      with:
        path: sdkbase
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
```

```
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addSpanInitializeStart(stack); err
!= nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
```

```
            }
          },
          "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for \n\t\t\tuser administration in the Active Directory.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "SELF_MANAGED",
                "value": "SELF_MANAGED",
                "documentation": "SELF_MANAGED type of Active Directory"
              },
              {
                "name": "AWS_MANAGED",
                "value": "AWS_MANAGED",
                "documentation": "AWS_MANAGED type of Active Directory"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Arn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
          },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                "smithy.api#required": {}
              }
            },
             "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
             }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
      "type": "structure",
      "members": {
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
          }
        },
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
      "type": "union",
      "members": {
        "SecretsManagerCredentialsProvider":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
          "traits": {
            "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/DeleteLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
              "smithy.api#required": {}
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",

               "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
             {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest":
{
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"

                }
            },
            "InstanceUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory domain.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}

        }
          }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation":
"<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {

           "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the identity provider.</p>",

         "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
           }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
              "traits":
{
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList": {

 "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
    "type": "structure",
    "members": {
        "Username": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProvider": {

      "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
```

```
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
               }

 },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
               }
            },
            "AssociationDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
               }
            },
            "DisassociationDate": {
               "target": "smithy.api#String",
               "traits": {

            "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
         }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
   "type": "structure",
   "members": {
      "message": {
         "target": "smithy.api#String"
      }
   },
   "traits": {
      "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
      "smithy.api#error": "server",
       "smithy.api#httpError": 500
   }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
   "type": "string",
   "traits": {
      "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
   "type": "service",
   "version": "2018-05-10",
   "operations": [
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"

   },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
      },
```

```
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
    },
    {

     "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager User Subscriptions",
      "arnNamespace": "license-manager-user-subscriptions",
      "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
```

```
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",
              "x-api-key",

      "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
              "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn":
 "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
```

```
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured
 endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],

          "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }
                  ],
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [
                    {
```

```
"fn": "booleanEquals",
                                "argv": [
                                  {
                                    "ref": "UseDualStack"
                                  },
                                  true
                                ]
                              }
                            ],
                            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                            "type": "error"
                          },
                          {
                            "conditions": [],
                            "endpoint": {
                              "url": {
                                "ref": "Endpoint"
                              },
                              "properties": {},

                          "headers": {}
                              },
                              "type": "endpoint"
                            }
                          ],
                          "type": "tree"
                        },
                        {
                          "conditions": [
                            {
                              "fn": "isSet",
                              "argv": [
                                {
                                  "ref": "Region"
                                }
                              ]
                            }
                          ],
                          "rules": [
                            {
                              "conditions": [
                                {
                                  "fn": "aws.partition",
                                  "argv":
[
                                    {
                                      "ref": "Region"
```

```
                }
            ],
            "assign": "PartitionResult"
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseFIPS"
                        },
                        true

]
                },
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",

                "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
```

```
{
                                    "fn": "booleanEquals",
                                    "argv": [
                                      true,
                                      {
                                        "fn": "getAttr",
                                        "argv": [
                                          {
                                            "ref": "PartitionResult"
                                          },
                                          "supportsDualStack"
                                        ]
                                      }
                                    ]

                                  }
                                ],
                                "rules": [
                                  {
                                    "conditions": [],
                                    "endpoint": {
                                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                      "properties": {},
                                      "headers": {}
                                    },
                                    "type": "endpoint"
                                  }
                                ],

            "type": "tree"
                              },
                              {
                                "conditions": [],
                                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                                "type": "error"
                              }
                            ],
                            "type": "tree"
                          },
                          {
                            "conditions": [
                              {
                                "fn": "booleanEquals",
                                "argv": [
                                  {
```

```
            "ref": "UseFIPS"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {

                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",
                                 "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"
                }

        ],
            "type": "tree"
```

```
    },
    {
      "conditions": [
        {
          "fn": "booleanEquals",
          "argv": [
            {
              "ref": "UseDualStack"
            },
            true
          ]
        }
      ],
      "rules": [
        {
          "conditions": [

       {
                "fn": "booleanEquals",
                "argv": [
                  true,
                  {
                    "fn": "getAttr",
                    "argv": [
                      {
                        "ref": "PartitionResult"
                      },
                      "supportsDualStack"
                    ]
                  }

    ]
            }
          ],
          "rules": [
            {
              "conditions": [],
              "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                "properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ],
           "type": "tree"
        },
```

```
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
```

```
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,

            "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {

   "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                  }
                },
```

```
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack":
true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url":
"https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack":
false
      }
    },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url":
"https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack":
true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "error": "FIPS and DualStack are enabled, but this partition
does not support one or both"
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },

  {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "error": "DualStack is enabled but this partition does not support DualStack"
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
```

```
                }
            },

    "params": {
                "Region": "us-iso-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "error": "FIPS and DualStack are enabled, but this partition does not support one or both"
            },
            "params": {
                "Region": "us-isob-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",

"expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
                }
            },
            "params": {
                "Region": "us-isob-east-1",
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "error": "DualStack is enabled but this partition does not support DualStack"
            },
            "params": {
                "Region": "us-isob-east-1",
                "UseFIPS": false,

    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {

          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint":
 "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
```

```
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                  "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are
not supported"
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
               "traits": {
                 "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS \n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
          },
```

```
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation":
 "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
                }
            },
            "LicenseServers": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
                }
            },
            "CreationTime": {

        "target": "smithy.api#Timestamp",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains details about a network endpoint for a Remote Desktop
Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits":
```

```
{
            "smithy.api#enum": [
                {
                    "name": "PROVISIONING",
                    "value": "PROVISIONING",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONING_FAILED",
                    "value": "PROVISIONING_FAILED",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONED",
                    "value": "PROVISIONED",
                    "documentation": ""
                },
                {
                    "name": "DELETING",
                    "value": "DELETING",
                    "documentation": ""
                },
                {
                    "name": "DELETION_FAILED",
                    "value": "DELETION_FAILED",
                    "documentation": ""
                },
                {
                     "name": "DELETED",
                    "value": "DELETED",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "HEALTHY",
                    "value": "HEALTHY",
                    "documentation": ""
                },
                {
                    "name": "UNHEALTHY",
                    "value": "UNHEALTHY",
                    "documentation": ""
```

```
                },
                {
                    "name": "NOT_APPLICABLE",
                    "value": "NOT_APPLICABLE",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>",
                    "smithy.api#required": {}
                }
            },
            "ServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",

              "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
```

```
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },

         "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
```

```
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
    <ul>\n        <li>\n        <p>Product</p>\n        </li>\n        <li>\n        <p>DirectoryId</p>\n
  </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {

       "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that
contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
```

```
        "type": "operation",
        "input": {

"target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
```

```
        "members": {
          "MaxResults": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
        </li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When
 this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token
\n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {

            "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits":
 {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n              <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
             "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
          "smithy.api#http": {
            "code": 200,
```

```
            "method": "POST",
            "uri": "/user/ListProductSubscriptions"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type":
 "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {

              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
```

```
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"

                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to
 retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

        }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#readonly": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
         "type": "structure",
         "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
         },
         "traits": {

    "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
         "type": "structure",
         "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits":
{
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceUserSummaries"
        }
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required":
{}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
          }
        },
        "Filters": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>You can use the following filters to streamline
results:</p>\n        <ul>\n        <li>\n        <p>Status</p>\n        </li>\n        <li>\n
<p>Username</p>\n        </li>\n        <li>\n        <p>Domain</p>\n        </li>\n        </ul>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
      "type": "structure",
```

```
        "members": {
            "InstanceUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
                 "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory
that contains the user information for the product subscription.</p>"
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type":
 "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
 \n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",

     "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider":
{
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
              "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
          "type": "structure",
          "members": {
            "Endpoint": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
          "type": "union",
          "members": {
            "RdsSalSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource
 contains settings to configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
            }
          },
```

```
      "traits": {
        "smithy.api#documentation": "<p>Contains settings for a specific server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {
      "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound
 TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation
servers.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n <note>\n <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
```

```
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/StartProductSubscription"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
          "type":
 "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider of the user.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
              }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse":
{
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },

 "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],

    "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An
 object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>"
                }
            },
            "ProductUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
                }
```

```
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The
 domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
 operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
         "type": "list",
          "member": {
            "target": "smithy.api#String"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
```

```
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    },
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 50
      },
      "smithy.api#sensitive": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResource": {

  "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
      "smithy.api#http": {
        "method": "PUT",
        "uri": "/tags/{ResourceArn}"
      },

  "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
    "type": "structure",
    "members": {
      "ResourceArn": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
        "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to tag.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits":
{
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Tags": {
          "type": "map",
          "key": {
            "target": "smithy.api#String"
          },
          "value": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
```

```
    },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
```

```
            "traits": {

 "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
          },

 "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
```

```
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}

        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code>\n
</p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the
 identity provider to update.</p>"
            }
          },
          "UpdateSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {

  "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse": {
        "type": "structure",
        "members": {
```

```
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
         "type": "structure",
         "members": {
            "AddSubnets": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint
 for products that\n\t\t\trequire connectivity to activation servers.</p>",
                  "smithy.api#required": {}
               }
            },
            "RemoveSubnets": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                  "smithy.api#required": {}
               }
            },
            "SecurityGroupId": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
               "traits": {
                  "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>Updates the registered identity providers product related configuration settings such as\n\t\t\tthe subnets to
provision VPC endpoints.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
         "type": "structure",
         "members": {
            "message": {
```

```
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
```

```
//
//   - Fingerprint
//
//   - Status
Filters
[]types.Filter

// Amazon Resource Names (ARNs) of the licenses.
LicenseArns []string

// Maximum number of results to return in a single call.
MaxResults *int32

// Token for the next set of results.
NextToken *string

noSmithyDocumentSerde
}

type ListLicensesOutput struct {

// License details.
Licenses []types.License

// Token for the next set of results.
NextToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
```

```
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
```

```
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil
 {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration
```

```
// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string
```

```
// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if
 err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
```

```
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err
 = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
```

```
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack);
 err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  OperationSerializer
 Build stack step
  ClientRequestID
  ComputeContentLength
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
```

```
 spanRetryLoop
 Retry
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 Signing
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 OperationDeserializer
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
```

```
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if
err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
 return err
}
```

```
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
 {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
```

```
 setOperationInput
 ResolveEndpoint
 OperationSerializer
Build stack step
 ClientRequestID
 ComputeContentLength
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 Retry
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 Signing
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 OperationDeserializer
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
```

```
 params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
 return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata
```

```
 {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
```

```
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string
```

```
// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
GetLicense
 Initialize stack step
  spanInitializeStart
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  OperationSerializer
 Build stack step
  ClientRequestID
  ComputeContentLength
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
```

spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
Signing
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
ListReceivedLicenses
Initialize stack step
spanInitializeStart
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
OperationSerializer
Build stack step
ClientRequestID
ComputeContentLength
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 Signing
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 OperationDeserializer
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
```

```
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
AssociateLicense
 Initialize stack step
```

spanInitializeStart
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
OperationSerializer
Build stack step
ClientRequestID
ComputeContentLength
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
Signing
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
           "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
```

```
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
```

```
            "SubscriptionProviderArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
               }
            },
            "SubscriptionProviderSource": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
                  "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
               }
            },
            "SecretArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
               }
            },
            "SubscriptionProviderStatus": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
               "traits": {
                  "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
               }
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/GetServiceSettings"

        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
```

```
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                 "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
            "AmiId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
                }
            },
            "InstanceID": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
                }
            },
            "InstanceType": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The instance type of the resource.</p>"
                }
```

```
        },
        "AccountID": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

   "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
```

```
            }
          },
          "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
          },
          "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager Linux Subscriptions",
           "arnNamespace": "license-manager-linux-subscriptions",
          "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
```

```
            "type": "Boolean"
        },
        "UseFIPS": {
          "builtIn": "AWS::UseFIPS",
          "required": true,
          "default": false,
          "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
          "type": "Boolean"
        },
        "Endpoint": {
          "builtIn": "SDK::Endpoint",
          "required": false,
          "documentation": "Override the endpoint used to send this request",
          "type": "String"
        }
      },
      "rules": [
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Endpoint"
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }

    ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
```

```
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ]
                        }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {

            "fn": "aws.partition",
                        "argv": [
                          {
                            "ref": "Region"
                          }
                        ],
                        "assign": "PartitionResult"
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {

                          "ref": "UseFIPS"
                              },
                              true
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseDualStack"
                              },
                              true
                            ]
                          }

  ],
                        "rules": [
                          {
                            "conditions": [
                              {
                                "fn": "booleanEquals",
                                "argv": [
                                  true,
                                  {
                                    "fn": "getAttr",
```

```
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"

                    },
                                            "supportsFIPS"
                                        ]
                                    }
                                ]
                            },
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [

                                        {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],

        "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
```

```
                    },
                    {
                      "conditions": [],
                      "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                      "type": "error"
                    }
                  ],
                  "type": "tree"
                },
                {

        "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {

                "fn": "booleanEquals",
                        "argv": [
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          },
                          true

                      ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
                          "rules": [
```

```
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS is enabled
but this partition does not support FIPS",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true

            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
```

```
                                    "argv": [
                                        {

                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

        {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                    }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-
```

```
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
"documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
"expect": {
"endpoint": {
"url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
},
"params": {
"Region": "us-east-1",
"UseFIPS": true,
"UseDualStack": true
}
},
{
"documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
"expect": {
"endpoint": {
"url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
}
},
```

```
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

  "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
        }

  },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
```

```
                {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                    }
                   },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {

   "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                    }
                  },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }

     },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
```

```
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "error": "FIPS and DualStack are enabled, but this partition does not support one or both"
        },
        "params": {

      "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack
enabled",
        "expect": {
          "error": "DualStack is enabled but this partition does not support DualStack"
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS":
false,
          "UseDualStack": false
```

```
    }
  },
  {
    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack enabled",
    "expect": {
      "error": "FIPS and DualStack are enabled, but this partition does not support one or both"
    },
    "params": {
      "Region": "us-isob-east-1",
      "UseFIPS": true,
      "UseDualStack": true
    }
  },
  {
    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
       }
    },
    "params": {
      "Region": "us-isob-east-1",
      "UseFIPS": true,
      "UseDualStack": false
    }
  },
  {
    "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack enabled",
    "expect": {
      "error": "DualStack is enabled but this partition does not support DualStack"
    },
    "params": {
      "Region": "us-isob-east-1",
      "UseFIPS": false,
      "UseDualStack": true
    }
  },
  {

   "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"
      }
    },
    "params": {
      "Region": "us-isob-east-1",
      "UseFIPS": false,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }

    },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {

          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
          "expect": {
```

```
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                  },
                  "params": {

 "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"

       },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings": {
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation":
"<p>Details if you have enabled resource discovery across your accounts in Organizations.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },

  {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the running Amazon EC2 instances that were discovered with
commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
```

```
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest":
{
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures that you can use to filter the results by your
specified criteria. \n    \tFor example, you can specify <code>Region</code> in the <code>Name</code>, with the
\n    \t<code>contains</code> operator to list all subscriptions that match a partial string in the \n
\t<code>Value</code>, such as <code>us-west</code>.</p>\n          <p>For each filter, you can specify one of the
following values for the <code>Name</code> key \n    \tto streamline results:</p>\n          <ul>\n          <li>\n
  <p>\n              <code>AccountID</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>AmiID</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>DualSubscription</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code>
 values to \n  \t\tdefine the behavior of the filter:</p>\n          <ul>\n          <li>\n            <p>\n
<code>contains</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>equals</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to
 start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
            "Instances": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
                }
            },
            "NextToken": {

     "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
             {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions that have been discovered. If you have
```

```
linked your\n      organization, the returned results will include data aggregated across your accounts in\n
Organizations.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",

   "items": "Subscriptions"
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those
that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n
 <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n
<li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n
<p>The
 valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n
<code>contains</code>\n               </p>\n            </li>\n            <li>\n               <p>\n
<code>equals</code>\n               </p>\n            </li>\n            <li>\n               <p>\n
<code>Notequal</code>\n               </p>\n            </li>\n         </ul>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis
 the nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
```

```
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }

    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",
            "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }

  },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
            "RegisteredSubscriptionProviders": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
                "traits": {
                    "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
                }
            },

            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {

            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
         }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
```

```
                "name": "EQUAL",
                "value": "Equal",
                "documentation": "Equal operator"
              },
              {
                "name": "NOT_EQUAL",
                "value": "NotEqual",
                "documentation": "Not equal operator"
              },
              {
                "name": "CONTAINS",
                "value": "Contains",
                "documentation": "Contains operator"
              }
            ],
            "smithy.api#length": {
              "min": 1,
              "max": 20
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration":
{
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
          "type": "operation",
          "input": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/RegisterSubscriptionProvider"

            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                "smithy.api#required": {}
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the
 Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                "smithy.api#required": {}
              }
            },
            "Tags": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription
```

provider resource that you registered. "
            }
        },
        "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
                "smithy.api#documentation": " A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions. "
            }
        },
        "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
                "smithy.api#documentation": " The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token. "
            }
        },
        "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
                "smithy.api#documentation": " Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token. "
            }
        },
        "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
            }
        },
        "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
            }
        }
    },
    "traits": {
        "smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
    }
},

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList":
{
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"

  }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "InProgress",
            "value": "InProgress",
            "documentation": "InProgress status"
          },
          {
            "name": "Completed",
            "value": "Completed",
            "documentation": "Completed status"
          },
          {
            "name": "Successful",
            "value": "Successful",
            "documentation": "Successful status"
          },
          {
            "name": "Failed",
```

```
                "value": "Failed",
                "documentation": "Failed status"
              }
            ]
          }
        },

      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            }
          }
        },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          },
          "smithy.api#uniqueItems": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
          "Name":
{
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
              }
            },
            "InstanceCount": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
              "traits": {
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [

  {
                "name": "RedHat",
                "value": "RedHat",
                "documentation": "RedHat subscription provider namespace"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "ACTIVE",
          "value": "ACTIVE",
          "documentation": "ACTIVE status"
        },
        {
          "name": "INVALID",
          "value": "INVALID",

"documentation": "INVALID status"
        },
        {
          "name": "PENDING",
          "value": "PENDING",
          "documentation": "PENDING status"
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    },
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 50
      },
      "smithy.api#sensitive": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
     },
    "errors": [
      {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members":
{
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }

    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
```

```
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
             "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tagKeys": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {

              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
```

```
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"

    },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/UpdateServiceSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
            "smithy.api#required": {}
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
            "smithy.api#required": {}
          }
        },
        "AllowUpdate": {
```

```
            "target":
 "smithy.api#Boolean",
            "traits": {
               "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
         }
      }
   },
   "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
      "type": "structure",
      "members": {
         "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
               "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
         },
         "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
             "traits": {
               "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
            }
         },
         "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
               "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
         },
         "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
               "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }

   },
         "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
               "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
          }
        }
      }
    }
```


ListLicenses
 Initialize stack step
 spanInitializeStart
 RegisterServiceMetadata
 legacyEndpointContextSetter
 SetLogger
 spanInitializeEnd
 Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 OperationSerializer
 Build stack step
 ClientRequestID
 ComputeContentLength
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
 Finalize stack step
 spanRetryLoop
 Retry
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 Signing
 Deserialize stack step

AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
CheckoutLicense
Initialize stack step
spanInitializeStart
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
OperationSerializer
Build stack step
ClientRequestID
ComputeContentLength
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
Signing
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware

RecordResponseTiming
RequestResponseLogger
DeleteLicense
Initialize stack step
spanInitializeStart
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
OperationSerializer
Build stack step
ClientRequestID
ComputeContentLength
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
Retry
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
Signing
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
OperationDeserializer
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
CreateLicense
Initialize stack step
spanInitializeStart
RegisterServiceMetadata
legacyEndpointContextSetter

```
 SetLogger
 OperationInputValidation
 spanInitializeEnd
Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 OperationSerializer
Build stack step
 ClientRequestID
 ComputeContentLength
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 Retry
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 Signing
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 OperationDeserializer
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)
```

```
// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options)) (*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
```

```
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err !=
 nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "AssociateLicense",
 }
}
```

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s)

with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf

of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
```

```
 params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
```

```
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
```

```
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err !=
 nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "metadata": {
     "suppressions": [
        {
           "id": "HttpMethodSemantics",
           "namespace": "*"
        },
        {
           "id": "HttpResponseCodeSemantics",
           "namespace": "*"
        },
        {
           "id": "PaginatedTrait",
           "namespace": "*"
        },
        {
           "id": "HttpHeaderTrait",
           "namespace": "*"
        },
        {
           "id": "HttpUriConflict",
           "namespace": "*"
        },
        {
           "id": "Service",
```

```
            "namespace": "*"
        }
    ]
},
"shapes": {
    "com.amazonaws.licensemanager#AWSLicenseManager": {
        "type": "service",
        "version": "2018-08-01",
        "operations": [
            {
                "target": "com.amazonaws.licensemanager#AcceptGrant"
            },

 {
                "target": "com.amazonaws.licensemanager#CheckInLicense"
            },
            {
                "target": "com.amazonaws.licensemanager#CheckoutBorrowLicense"
            },
            {
                "target": "com.amazonaws.licensemanager#CheckoutLicense"
            },
            {
                "target": "com.amazonaws.licensemanager#CreateGrant"
            },
            {
                "target": "com.amazonaws.licensemanager#CreateGrantVersion"
            },
            {
                "target": "com.amazonaws.licensemanager#CreateLicense"
            },
            {
                "target": "com.amazonaws.licensemanager#CreateLicenseConfiguration"
            },
            {
                "target": "com.amazonaws.licensemanager#CreateLicenseConversionTaskForResource"
            },
            {
                "target": "com.amazonaws.licensemanager#CreateLicenseManagerReportGenerator"
             },
            {
                "target": "com.amazonaws.licensemanager#CreateLicenseVersion"
            },
            {
                "target": "com.amazonaws.licensemanager#CreateToken"
            },
            {
                "target": "com.amazonaws.licensemanager#DeleteGrant"
```

```
    },
    {
      "target": "com.amazonaws.licensemanager#DeleteLicense"
    },
    {
      "target": "com.amazonaws.licensemanager#DeleteLicenseConfiguration"
    },
    {
      "target": "com.amazonaws.licensemanager#DeleteLicenseManagerReportGenerator"
    },
    {
      "target": "com.amazonaws.licensemanager#DeleteToken"
    },
    {
      "target": "com.amazonaws.licensemanager#ExtendLicenseConsumption"

  },
    {
      "target": "com.amazonaws.licensemanager#GetAccessToken"
    },
    {
      "target": "com.amazonaws.licensemanager#GetGrant"
    },
    {
      "target": "com.amazonaws.licensemanager#GetLicense"
    },
    {
      "target": "com.amazonaws.licensemanager#GetLicenseConfiguration"
    },
    {
      "target": "com.amazonaws.licensemanager#GetLicenseConversionTask"
    },
    {
      "target": "com.amazonaws.licensemanager#GetLicenseManagerReportGenerator"
    },
    {
      "target": "com.amazonaws.licensemanager#GetLicenseUsage"
    },
    {
      "target": "com.amazonaws.licensemanager#GetServiceSettings"
    },
    {
      "target": "com.amazonaws.licensemanager#ListAssociationsForLicenseConfiguration"
     },
    {
      "target": "com.amazonaws.licensemanager#ListDistributedGrants"
    },
    {
```

```
    "target": "com.amazonaws.licensemanager#ListFailuresForLicenseConfigurationOperations"
  },
  {
    "target": "com.amazonaws.licensemanager#ListLicenseConfigurations"
  },
  {
    "target": "com.amazonaws.licensemanager#ListLicenseConversionTasks"
  },
  {
    "target": "com.amazonaws.licensemanager#ListLicenseManagerReportGenerators"
  },
  {
    "target": "com.amazonaws.licensemanager#ListLicenses"
  },
  {
    "target": "com.amazonaws.licensemanager#ListLicenseSpecificationsForResource"
  },
  {

   "target": "com.amazonaws.licensemanager#ListLicenseVersions"
  },
  {
    "target": "com.amazonaws.licensemanager#ListReceivedGrants"
  },
  {
    "target": "com.amazonaws.licensemanager#ListReceivedGrantsForOrganization"
  },
  {
    "target": "com.amazonaws.licensemanager#ListReceivedLicenses"
  },
  {
    "target": "com.amazonaws.licensemanager#ListReceivedLicensesForOrganization"
  },
  {
    "target": "com.amazonaws.licensemanager#ListResourceInventory"
  },
  {
    "target": "com.amazonaws.licensemanager#ListTagsForResource"
  },
  {
    "target": "com.amazonaws.licensemanager#ListTokens"
  },
  {
    "target": "com.amazonaws.licensemanager#ListUsageForLicenseConfiguration"
   },
  {
    "target": "com.amazonaws.licensemanager#RejectGrant"
  },
```

```
            {
              "target": "com.amazonaws.licensemanager#TagResource"
            },
            {
              "target": "com.amazonaws.licensemanager#UntagResource"
            },
            {
              "target": "com.amazonaws.licensemanager#UpdateLicenseConfiguration"
            },
            {
              "target": "com.amazonaws.licensemanager#UpdateLicenseManagerReportGenerator"
            },
            {
              "target": "com.amazonaws.licensemanager#UpdateLicenseSpecificationsForResource"
            },
            {
              "target": "com.amazonaws.licensemanager#UpdateServiceSettings"
            }
          ],
          "traits": {
            "aws.api#service": {
               "sdkId": "License Manager",
              "arnNamespace": "license-manager",
              "cloudFormationName": "LicenseManager",
              "cloudTrailEventSource": "licensemanager.amazonaws.com",
              "endpointPrefix": "license-manager"
            },
            "aws.auth#sigv4": {
              "name": "license-manager"
            },
            "aws.protocols#awsJson1_1": {},
            "smithy.api#documentation": "<p>License Manager makes it easier to manage licenses from software
vendors across multiple \n         Amazon Web Services accounts and on-premises servers.</p>",
            "smithy.api#title": "AWS License Manager",
            "smithy.api#xmlNamespace": {
              "uri": "https://license-manager.amazonaws.com/doc/2018_08_01"
            },
            "smithy.rules#endpointRuleSet": {
              "version": "1.0",
              "parameters": {
                "Region": {
                  "builtIn": "AWS::Region",
                  "required": false,
                  "documentation": "The AWS region used to dispatch the request.",
                  "type": "String"
                },
                "UseDualStack": {
                  "builtIn": "AWS::UseDualStack",
```

```
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
            "type": "Boolean"
        },
        "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
        },
        "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
        }
    },
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Endpoint"
                        }
                    ]

                }
            ],
            "type": "tree",
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
```

```
                ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {

"conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": {
                        "ref": "Endpoint"
                     },
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ]
    },
    {
        "conditions": [
            {
                "fn": "isSet",
                "argv": [
                    {
                        "ref": "Region"
                    }
                ]
            }
        ],
        "type": "tree",
        "rules": [
            {
                "conditions": [
```

```
                {
                    "fn": "aws.partition",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ],
                    "assign": "PartitionResult"
                }
            ],
            "type": "tree",
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref":
"UseFIPS"
                                },
                                true
                            ]
                        },
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true
                            ]
                        }
                    ],
                    "type": "tree",
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {
                                                    "ref": "PartitionResult"
                                                },
```

```
                                    "supportsFIPS"
                                ]

                            }
                        ]
                    },
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            true,
                            {
                                "fn": "getAttr",
                                "argv": [
                                    {
                                        "ref": "PartitionResult"
                                    },

    "supportsDualStack"
                                ]
                            }
                        ]
                    }
                ],
                "type": "tree",
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}

                    },
                        "type": "endpoint"
                    }
                ]
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ]
    },
    {
        "conditions": [
```

```
        {
          "fn": "booleanEquals",

      "argv": [
                {
                  "ref": "UseFIPS"
                },
                true
              ]
            }
          ],
          "type": "tree",
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    true,

{
                      "fn": "getAttr",
                      "argv": [
                        {
                          "ref": "PartitionResult"
                        },
                        "supportsFIPS"
                      ]
                    }
                  ]
                }
              ],
              "type": "tree",
              "rules": [

{
                  "conditions": [],
                  "endpoint": {
                    "url": "https://license-manager-fips.{Region}.{PartitionResult#dnsSuffix}",
                    "properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ]
            },
            {
              "conditions": [],
```

```
                "error": "FIPS is enabled but this
partition does not support FIPS",
                "type": "error"
              }
            ]
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "type": "tree",
             "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },

    "supportsDualStack"
                          ]
                        }
                      ]
                    }
                  ],
                  "type": "tree",
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-
manager.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
```

```
                    },
                        "type": "endpoint"
                    }
                  ]
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
                  "type": "error"
                }
              ]
            },
            {
              "conditions": [],
              "endpoint": {
                "url": "https://license-manager.{Region}.{PartitionResult#dnsSuffix}",
                 "properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ]
        }
      ]
    },
    {
      "conditions": [],
      "error": "Invalid Configuration: Missing Region",
      "type": "error"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region af-south-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager.af-south-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "af-south-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
```

```
},
{
  "documentation": "For region ap-east-1 with FIPS disabled and DualStack disabled",
  "expect": {
    "endpoint": {
      "url": "https://license-manager.ap-east-1.amazonaws.com"
    }
  },
  "params": {
    "Region": "ap-east-1",
    "UseFIPS": false,
    "UseDualStack": false
   }
},
{
  "documentation": "For region ap-northeast-1 with FIPS disabled and DualStack disabled",
  "expect": {
    "endpoint": {
      "url": "https://license-manager.ap-northeast-1.amazonaws.com"
    }
  },
  "params": {
    "Region": "ap-northeast-1",
    "UseFIPS": false,
    "UseDualStack": false
  }
},
{
  "documentation": "For region ap-northeast-2 with FIPS disabled and DualStack disabled",
  "expect": {
    "endpoint": {
      "url": "https://license-manager.ap-northeast-2.amazonaws.com"
     }
  },
  "params": {
    "Region": "ap-northeast-2",
    "UseFIPS": false,
    "UseDualStack": false
  }
},
{
  "documentation": "For region ap-northeast-3 with FIPS disabled and DualStack disabled",
  "expect": {
    "endpoint": {
      "url": "https://license-manager.ap-northeast-3.amazonaws.com"
    }
  },
  "params": {
```

```
            "Region": "ap-northeast-3",
            "UseFIPS": false,
            "UseDualStack": false
          }

    },
        {
          "documentation": "For region ap-south-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.ap-south-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "ap-south-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region ap-southeast-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.ap-southeast-1.amazonaws.com"

    }
          },
          "params": {
            "Region": "ap-southeast-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region ap-southeast-2 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.ap-southeast-2.amazonaws.com"
            }
          },
          "params": {
            "Region": "ap-southeast-2",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
```

```
        "documentation": "For region ap-southeast-3 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager.ap-southeast-3.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "ap-southeast-3",
                  "UseFIPS": false,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region ca-central-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager.ca-central-1.amazonaws.com"
                  }
                },

               "params": {
                    "Region": "ca-central-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                }
              },
              {
                "documentation": "For region eu-central-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager.eu-central-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "eu-central-1",
                  "UseFIPS": false,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region eu-north-1 with FIPS
disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager.eu-north-1.amazonaws.com"
                  }
                },
                "params": {
```

```
            "Region": "eu-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region eu-south-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.eu-south-1.amazonaws.com"
            }
          },
          "params": {
            "Region":
"eu-south-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region eu-west-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.eu-west-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "eu-west-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region eu-west-2 with FIPS disabled and DualStack disabled",
          "expect": {

          "endpoint": {
              "url": "https://license-manager.eu-west-2.amazonaws.com"
            }
          },
          "params": {
            "Region": "eu-west-2",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region eu-west-3 with FIPS disabled and DualStack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager.eu-west-3.amazonaws.com"
        }
      },
      "params": {
        "Region": "eu-west-3",
        "UseFIPS": false,

"UseDualStack": false
      }
    },
    {
      "documentation": "For region me-south-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager.me-south-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "me-south-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region sa-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager.sa-east-1.amazonaws.com"
         }
      },
      "params": {
        "Region": "sa-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
            "UseDualStack": false
          }

    },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-east-2 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager.us-east-2.amazonaws.com"
              }

           },
            "params": {
              "Region": "us-east-2",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-east-2 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-fips.us-east-2.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-2",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region
    us-west-1 with FIPS disabled and DualStack disabled",
            "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager.us-west-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-west-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-west-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-fips.us-west-1.amazonaws.com"
            }
          },
          "params": {

      "Region": "us-west-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-west-2 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.us-west-2.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-west-2",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-west-2 with FIPS enabled and DualStack disabled",

  "expect": {
            "endpoint": {
              "url": "https://license-manager-fips.us-west-2.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-west-2",
            "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-fips.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,

            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url":
"https://license-manager.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-northwest-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager.cn-northwest-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-northwest-1",
              "UseFIPS": false,
              "UseDualStack": false

    }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-fips.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-fips.cn-north-1.amazonaws.com.cn"
             }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
```

```
        },

    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-fips.us-gov-east-1.amazonaws.com"
          }
         },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-west-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager.us-gov-west-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-west-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation":
"For region us-gov-west-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-fips.us-gov-west-1.amazonaws.com"
          }
```

```
      },
      "params": {
        "Region": "us-gov-west-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-fips.us-gov-east-1.api.aws"
        }
      },

  "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
```

```
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "error": "FIPS and DualStack are enabled, but this partition does not support one or both"
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "error": "DualStack is enabled
but this partition does not support DualStack"
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
```

```
    },

    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "error": "FIPS and DualStack are enabled, but this partition does not support one or both"
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },

  "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "error": "DualStack is enabled but this partition does not support DualStack"
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",

"expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
```

```
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
                "endpoint": {
                    "url": "https://example.com"
                }
            },
            "params": {
                "UseFIPS": false,

    "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
                "error":
 "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "Missing region",
            "expect": {
```

```
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanager#AcceptGrant": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanager#AcceptGrantRequest"

},
          "output": {
            "target": "com.amazonaws.licensemanager#AcceptGrantResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
              "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
              "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
              "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
              "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
              "target": "com.amazonaws.licensemanager#ValidationException"

    }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Accepts the specified grant.</p>"
          }
        },
        "com.amazonaws.licensemanager#AcceptGrantRequest": {
          "type": "structure",
          "members": {
```

```
        "GrantArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits": {
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the grant.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanager#AcceptGrantResponse": {
      "type": "structure",
      "members": {
        "GrantArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits": {
            "smithy.api#documentation": "<p>Grant
ARN.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanager#GrantStatus",
          "traits": {
            "smithy.api#documentation": "<p>Grant status.</p>"
          }
        },
        "Version": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Grant version.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanager#AccessDeniedException": {
      "type": "structure",
      "members": {
        "Message": {
          "target": "com.amazonaws.licensemanager#Message"
        }
      },
      "traits": {
        "aws.protocols#awsQueryError": {
```

```
"code": "ServiceAccessDenied",
            "httpResponseCode": 401
          },
          "smithy.api#documentation": "<p>Access to resource denied.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 401
        }
    },
    "com.amazonaws.licensemanager#ActivationOverrideBehavior": {
      "type": "enum",
      "members": {
        "DISTRIBUTED_GRANTS_ONLY": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "DISTRIBUTED_GRANTS_ONLY"
          }
        },
        "ALL_GRANTS_PERMITTED_BY_ISSUER": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "ALL_GRANTS_PERMITTED_BY_ISSUER"
          }
        }
      }
    },
    "com.amazonaws.licensemanager#AllowedOperation": {

    "type": "enum",
      "members": {
        "CREATE_GRANT": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "CreateGrant"
          }
        },
        "CHECKOUT_LICENSE": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "CheckoutLicense"
          }
        },
        "CHECKOUT_BORROW_LICENSE": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "CheckoutBorrowLicense"
          }
        },
```

```
            "CHECK_IN_LICENSE": {
               "target": "smithy.api#Unit",
               "traits": {
                  "smithy.api#enumValue": "CheckInLicense"
               }
            },
            "EXTEND_CONSUMPTION_LICENSE":
{
               "target": "smithy.api#Unit",
               "traits": {
                  "smithy.api#enumValue": "ExtendConsumptionLicense"
               }
            },
            "LIST_PURCHASED_LICENSES": {
               "target": "smithy.api#Unit",
               "traits": {
                  "smithy.api#enumValue": "ListPurchasedLicenses"
               }
            },
            "CREATE_TOKEN": {
               "target": "smithy.api#Unit",
               "traits": {
                  "smithy.api#enumValue": "CreateToken"
               }
            }
         }
      },
      "com.amazonaws.licensemanager#AllowedOperationList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanager#AllowedOperation"
         },
         "traits": {
            "smithy.api#length": {
               "min": 1,
               "max":
7
            }
         }
      },
      "com.amazonaws.licensemanager#Arn": {
         "type": "string",
         "traits": {
            "smithy.api#length": {
               "min": 0,
               "max": 2048
            },
            "smithy.api#pattern": "^arn:aws(-(cn|us-gov|iso-b|iso-c|iso-d))?:[A-Za-z0-9][A-Za-z0-9_/.-]{0,62}:[A-Za-
```

```
z0-9_/.-]{0,63}:[A-Za-z0-9_/.-]{0,63}:[A-Za-z0-9][A-Za-z0-9:_/+=,@.-]{0,1023}$"
        }
      },
      "com.amazonaws.licensemanager#ArnList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#Arn"
        }
      },
      "com.amazonaws.licensemanager#AuthorizationException": {
        "type": "structure",
        "members": {
          "Message": {
            "target": "com.amazonaws.licensemanager#Message"
          }
        },
        "traits": {
          "aws.protocols#awsQueryError":
{
            "code": "AuthorizationFailure",
            "httpResponseCode": 403
          },
          "smithy.api#documentation": "<p>The Amazon Web Services user account does not have permission to
perform the action. Check the IAM\n        policy associated with this account.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 403
        }
      },
      "com.amazonaws.licensemanager#AutomatedDiscoveryInformation": {
        "type": "structure",
        "members": {
          "LastRunTime": {
            "target": "com.amazonaws.licensemanager#DateTime",
            "traits": {
              "smithy.api#documentation": "<p>Time that automated discovery last ran.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes automated discovery.</p>"
        }
      },

    "com.amazonaws.licensemanager#Boolean": {
        "type": "boolean",
        "traits": {
          "smithy.api#default": false
        }
```

```
    },
    "com.amazonaws.licensemanager#BorrowConfiguration": {
      "type": "structure",
      "members": {
        "AllowEarlyCheckIn": {
          "target": "com.amazonaws.licensemanager#BoxBoolean",
          "traits": {
            "smithy.api#documentation": "<p>Indicates whether early check-ins are allowed.</p>",
            "smithy.api#required": {}
          }
        },
        "MaxTimeToLiveInMinutes": {
          "target": "com.amazonaws.licensemanager#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>Maximum time for the borrow configuration, in minutes.</p>",
            "smithy.api#required": {}
          }
        }

},
      "traits": {
        "smithy.api#documentation": "<p>Details about a borrow configuration.</p>"
      }
    },
    "com.amazonaws.licensemanager#BoxBoolean": {
      "type": "boolean"
    },
    "com.amazonaws.licensemanager#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanager#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanager#CheckInLicense": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanager#CheckInLicenseRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanager#CheckInLicenseResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanager#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanager#AuthorizationException"
```

```
        },
            {
                "target": "com.amazonaws.licensemanager#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Checks in the specified license. Check in a license when it is no longer
in use.</p>"
        }
    },
    "com.amazonaws.licensemanager#CheckInLicenseRequest":
{
        "type": "structure",
        "members": {
            "LicenseConsumptionToken": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>License consumption token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Beneficiary": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>License beneficiary.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#CheckInLicenseResponse": {
```

```
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#CheckoutBorrowLicense":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#CheckoutBorrowLicenseRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#CheckoutBorrowLicenseResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#EntitlementNotAllowedException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#NoEntitlementsAllowedException"
          },
          {
            "target":
"com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#RedirectException"
          },
          {
            "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          },
          {
            "target": "com.amazonaws.licensemanager#UnsupportedDigitalSignatureMethodException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Checks out the specified license for offline use.</p>"
          }
        },
        "com.amazonaws.licensemanager#CheckoutBorrowLicenseRequest": {
          "type": "structure",
          "members":
{
            "LicenseArn": {
              "target": "com.amazonaws.licensemanager#Arn",
              "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license. The license must
use the borrow consumption configuration.</p>",
                "smithy.api#required": {}
              }
            },
            "Entitlements": {
              "target": "com.amazonaws.licensemanager#EntitlementDataList",
              "traits": {
                "smithy.api#documentation": "<p>License entitlements. Partial checkouts are not supported.</p>",
                "smithy.api#required": {}
              }
            },
            "DigitalSignatureMethod": {
              "target": "com.amazonaws.licensemanager#DigitalSignatureMethod",
              "traits": {
                "smithy.api#documentation": "<p>Digital signature method. The possible
 value is JSON Web Signature (JWS) algorithm PS384.\n         For more information, see <a
href=\"https://tools.ietf.org/html/rfc7518#section-3.5\">RFC 7518 Digital Signature with RSASSA-PSS</a>.</p>",
                "smithy.api#required": {}
              }
            },
            "NodeId": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Node ID.</p>"
              }
            },
            "CheckoutMetadata": {
              "target": "com.amazonaws.licensemanager#MetadataList",
              "traits": {
                "smithy.api#documentation": "<p>Information about constraints.</p>"
              }
            },
            "ClientToken": {
```

```
            "target": "com.amazonaws.licensemanager#ClientToken",
            "traits": {
              "smithy.api#documentation":
"<p>Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#CheckoutBorrowLicenseResponse": {
        "type": "structure",
        "members": {
          "LicenseArn": {
            "target": "com.amazonaws.licensemanager#Arn",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>"
            }
          },
          "LicenseConsumptionToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>License consumption token.</p>"
            }
          },
          "EntitlementsAllowed":
{
            "target": "com.amazonaws.licensemanager#EntitlementDataList",
            "traits": {
              "smithy.api#documentation": "<p>Allowed license entitlements.</p>"
            }
          },
          "NodeId": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Node ID.</p>"
            }
          },
          "SignedToken": {
            "target": "com.amazonaws.licensemanager#SignedToken",
            "traits": {
              "smithy.api#documentation": "<p>Signed token.</p>"
            }
          },
          "IssuedAt": {
            "target": "com.amazonaws.licensemanager#ISO8601DateTime",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Date and time at which the license checkout
is issued.</p>"
            }
          },
          "Expiration": {
            "target": "com.amazonaws.licensemanager#ISO8601DateTime",
            "traits": {
              "smithy.api#documentation": "<p>Date and time at which the license checkout expires.</p>"
            }
          },
          "CheckoutMetadata": {
            "target": "com.amazonaws.licensemanager#MetadataList",
            "traits": {
              "smithy.api#documentation": "<p>Information about constraints.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#CheckoutLicense": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#CheckoutLicenseRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#CheckoutLicenseResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#NoEntitlementsAllowedException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#RedirectException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
            },
            {
               "target":
 "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
               "target": "com.amazonaws.licensemanager#UnsupportedDigitalSignatureMethodException"
            },
            {
               "target": "com.amazonaws.licensemanager#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Checks out the specified license.</p>\n         <note>\n            <p>If the
 account that created the license is the same that is performing the check out, you must\n            specify the account
 as the beneficiary.</p>\n         </note>"
         }
      },
      "com.amazonaws.licensemanager#CheckoutLicenseRequest": {
         "type": "structure",
         "members": {
            "ProductSKU": {
               "target": "com.amazonaws.licensemanager#String",
               "traits": {
                  "smithy.api#documentation": "<p>Product
 SKU.</p>",
                  "smithy.api#required": {}
               }
            },
            "CheckoutType": {
               "target": "com.amazonaws.licensemanager#CheckoutType",
               "traits": {
                  "smithy.api#documentation": "<p>Checkout type.</p>",
                  "smithy.api#required": {}
               }
            },
            "KeyFingerprint": {
               "target": "com.amazonaws.licensemanager#String",
               "traits": {
                  "smithy.api#documentation": "<p>Key fingerprint identifying the license.</p>",
                  "smithy.api#required": {}
               }
            },
            "Entitlements": {
               "target": "com.amazonaws.licensemanager#EntitlementDataList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>License entitlements.</p>",

    "smithy.api#required": {}
              }
            },
            "ClientToken": {
              "target": "com.amazonaws.licensemanager#ClientToken",
              "traits": {
                "smithy.api#documentation": "<p>Unique, case-sensitive identifier that you provide to ensure the
idempotency of the request.</p>",
                "smithy.api#required": {}
              }
            },
            "Beneficiary": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>License beneficiary.</p>"
              }
            },
            "NodeId": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Node ID.</p>"
              }
            }
          },
          "traits": {

           "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanager#CheckoutLicenseResponse": {
          "type": "structure",
          "members": {
            "CheckoutType": {
              "target": "com.amazonaws.licensemanager#CheckoutType",
              "traits": {
                "smithy.api#documentation": "<p>Checkout type.</p>"
              }
            },
            "LicenseConsumptionToken": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>License consumption token.</p>"
              }
            },
            "EntitlementsAllowed": {
```

```
            "target": "com.amazonaws.licensemanager#EntitlementDataList",
            "traits": {
              "smithy.api#documentation": "<p>Allowed license entitlements.</p>"
            }
          },
          "SignedToken": {
            "target": "com.amazonaws.licensemanager#SignedToken",
            "traits": {
              "smithy.api#documentation": "<p>Signed token.</p>"
            }
          },
          "NodeId": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Node ID.</p>"
            }
          },
          "IssuedAt": {
            "target": "com.amazonaws.licensemanager#ISO8601DateTime",
            "traits": {
              "smithy.api#documentation": "<p>Date and time at which the license checkout is issued.</p>"
            }
          },
          "Expiration": {
            "target": "com.amazonaws.licensemanager#ISO8601DateTime",
            "traits": {
              "smithy.api#documentation": "<p>Date and
time at which the license checkout expires.</p>"
            }
          },
          "LicenseArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the checkout license.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#CheckoutType": {
        "type": "enum",
        "members": {
          "PROVISIONAL": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "PROVISIONAL"
```

```
            }
          },
          "PERPETUAL": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "PERPETUAL"
            }
          }
        }
      },
      "com.amazonaws.licensemanager#ClientRequestToken": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 36
          }
        }
      },
      "com.amazonaws.licensemanager#ClientToken": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 2048
          },
          "smithy.api#pattern": "^\\S+$"
        }
      },
      "com.amazonaws.licensemanager#ConflictException": {
        "type": "structure",
        "members": {
          "Message": {
            "target": "com.amazonaws.licensemanager#Message"
          }
        },
        "traits": {
          "aws.protocols#awsQueryError": {
            "code": "ConflictException",
            "httpResponseCode":
409
          },
          "smithy.api#documentation": "<p>There was a conflict processing the request. Try your request
again.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 409
        }
      },
```

```
    "com.amazonaws.licensemanager#ConsumedLicenseSummary": {
      "type": "structure",
      "members": {
        "ResourceType": {
          "target": "com.amazonaws.licensemanager#ResourceType",
          "traits": {
            "smithy.api#documentation": "<p>Resource type of the resource consuming a license.</p>"
          }
        },
        "ConsumedLicenses": {
          "target": "com.amazonaws.licensemanager#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>Number of licenses consumed by the resource.</p>"
          }
        }
      },

"traits": {
        "smithy.api#documentation": "<p>Details about license consumption.</p>"
      }
    },
    "com.amazonaws.licensemanager#ConsumedLicenseSummaryList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#ConsumedLicenseSummary"
      }
    },
    "com.amazonaws.licensemanager#ConsumptionConfiguration": {
      "type": "structure",
      "members": {
        "RenewType": {
          "target": "com.amazonaws.licensemanager#RenewType",
          "traits": {
            "smithy.api#documentation": "<p>Renewal frequency.</p>"
          }
        },
        "ProvisionalConfiguration": {
          "target": "com.amazonaws.licensemanager#ProvisionalConfiguration",
          "traits": {
            "smithy.api#documentation": "<p>Details about a provisional configuration.</p>"
           }
        },
        "BorrowConfiguration": {
          "target": "com.amazonaws.licensemanager#BorrowConfiguration",
          "traits": {
            "smithy.api#documentation": "<p>Details about a borrow configuration.</p>"
          }
        }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about a consumption configuration.</p>"
        }
    },
    "com.amazonaws.licensemanager#CreateGrant": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#CreateGrantRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#CreateGrantResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target":
 "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a grant for the specified license. A grant shares the use of
 license\n            entitlements with a specific Amazon Web Services account, an organization, or an\n
 organizational unit (OU). For more
 information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/granted-
licenses.html\">Granted licenses in License Manager</a> in the <i>License Manager User Guide</i>.</p>"
        }
    },
    "com.amazonaws.licensemanager#CreateGrantRequest": {
        "type": "structure",
        "members": {
```

```
        "ClientToken": {
          "target": "com.amazonaws.licensemanager#ClientToken",
          "traits": {
            "smithy.api#documentation": "<p>Unique, case-sensitive identifier that you provide to ensure the
idempotency of the request.</p>",
            "smithy.api#required": {}
          }
        },
        "GrantName": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Grant name.</p>",
            "smithy.api#required": {}

    }
        },
        "LicenseArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits": {
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>",
            "smithy.api#required": {}
          }
        },
        "Principals": {
          "target": "com.amazonaws.licensemanager#PrincipalArnList",
          "traits": {
            "smithy.api#documentation": "<p>The grant principals. You can specify one of the following as an
Amazon Resource Name\n        (ARN):</p>\n        <ul>\n        <li>\n        <p>An Amazon Web Services
account, which includes only the account specified.</p>\n        </li>\n        </ul>\n        <ul>\n        <li>\n
    <p>An organizational unit (OU), which includes all accounts in the OU.</p>\n        </li>\n        </ul>\n
<ul>\n
        <li>\n        <p>An organization, which will include all accounts across your organization.</p>\n
</li>\n        </ul>",
            "smithy.api#required": {}
          }
        },
        "HomeRegion": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Home Region of the grant.</p>",
            "smithy.api#required": {}
          }
        },
        "AllowedOperations": {
          "target": "com.amazonaws.licensemanager#AllowedOperationList",
          "traits": {
            "smithy.api#documentation": "<p>Allowed operations for the grant.</p>",
            "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },

    "com.amazonaws.licensemanager#CreateGrantResponse": {
        "type": "structure",
        "members": {
          "GrantArn": {
            "target": "com.amazonaws.licensemanager#Arn",
            "traits": {
              "smithy.api#documentation": "<p>Grant ARN.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanager#GrantStatus",
            "traits": {
              "smithy.api#documentation": "<p>Grant status.</p>"
            }
          },
          "Version": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Grant version.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
     "com.amazonaws.licensemanager#CreateGrantVersion":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#CreateGrantVersionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#CreateGrantVersionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
             },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a new version of the specified grant. For more information,
see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/granted-
licenses.html\">Granted licenses in License Manager</a> in the <i>License Manager User Guide</i>.</p>"
        }
    },
    "com.amazonaws.licensemanager#CreateGrantVersionRequest": {
        "type": "structure",
        "members": {
            "ClientToken": {
                "target": "com.amazonaws.licensemanager#ClientToken",
                "traits": {
                    "smithy.api#documentation": "<p>Unique, case-sensitive identifier that you provide to ensure the
idempotency of the request.</p>",

  "smithy.api#required": {}
                }
            },
            "GrantArn": {
                "target": "com.amazonaws.licensemanager#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the grant.</p>",
                    "smithy.api#required": {}
                }
            },
            "GrantName": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Grant name.</p>"
                }
```

```
        },
        "AllowedOperations": {
          "target": "com.amazonaws.licensemanager#AllowedOperationList",
          "traits": {
            "smithy.api#documentation": "<p>Allowed operations for the grant.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanager#GrantStatus",
          "traits": {
            "smithy.api#documentation": "<p>Grant status.</p>"
          }
        },
        "StatusReason": {
          "target": "com.amazonaws.licensemanager#StatusReasonMessage",
          "traits": {
            "smithy.api#documentation": "<p>Grant status reason.</p>"
          }
        },
        "SourceVersion": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Current version of the grant.</p>"
          }
        },
        "Options": {
          "target": "com.amazonaws.licensemanager#Options",
          "traits": {
            "smithy.api#documentation": "<p>The options specified for the grant.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanager#CreateGrantVersionResponse": {
      "type": "structure",
      "members": {
        "GrantArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits": {
            "smithy.api#documentation": "<p>Grant ARN.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanager#GrantStatus",
          "traits": {
```

```
                "smithy.api#documentation": "<p>Grant status.</p>"
            }
          },
          "Version": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>New version of the grant.</p>"
            }
          }
        },
        "traits":
{
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#CreateLicense": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#CreateLicenseRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#CreateLicenseResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#RedirectException"
           },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          },
          {
            "target": "com.amazonaws.licensemanager#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a license.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanager#CreateLicenseConfiguration": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#CreateLicenseConfigurationRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#CreateLicenseConfigurationResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a license configuration.</p>\n          <p>A license configuration is an abstraction of a customer license agreement that can be\n          consumed and enforced by License Manager. Components include specifications for the license\n          type (licensing by instance, socket, CPU, or vCPU), allowed tenancy (shared tenancy, \n          Dedicated Instance, Dedicated Host, or all of these), license affinity  to host (how long a \n          license must be associated with a host), and the number of licenses purchased and used.</p>"
        }
      },
      "com.amazonaws.licensemanager#CreateLicenseConfigurationRequest": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Name of the license configuration.</p>",
              "smithy.api#required": {}
            }
```

```
        },
        "Description": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Description of the license configuration.</p>"
          }
        },
        "LicenseCountingType": {
          "target": "com.amazonaws.licensemanager#LicenseCountingType",
          "traits": {
            "smithy.api#documentation": "<p>Dimension used to track the license inventory.</p>",
            "smithy.api#required": {}
          }
        },
        "LicenseCount": {
          "target": "com.amazonaws.licensemanager#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>Number of licenses managed by the license configuration.</p>"
          }
        },
        "LicenseCountHardLimit": {
          "target": "com.amazonaws.licensemanager#BoxBoolean",
          "traits": {
            "smithy.api#documentation": "<p>Indicates whether hard or soft license enforcement is used.
Exceeding a hard limit\n        blocks the launch of new instances.</p>"
          }
        },
        "LicenseRules": {
          "target":
 "com.amazonaws.licensemanager#StringList",
          "traits": {
            "smithy.api#documentation": "<p>License rules. The syntax is #name=value (for example,
#allowedTenancy=EC2-DedicatedHost). The available rules \n        vary by dimension, as follows.</p>\n
<ul>\n          <li>\n            <p>\n              <code>Cores</code> dimension: <code>allowedTenancy</code> |\n
        <code>licenseAffinityToHost</code> |\n            <code>maximumCores</code> |
<code>minimumCores</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Instances</code> dimension: <code>allowedTenancy</code> | \n            <code>maximumCores</code> |
<code>minimumCores</code> |\n            <code>maximumSockets</code> | <code>minimumSockets</code> |\n
        <code>maximumVcpus</code> | <code>minimumVcpus</code>\n            </p>\n          </li>\n
<li>\n
  <p>\n            <code>Sockets</code> dimension: <code>allowedTenancy</code> | \n
<code>licenseAffinityToHost</code> |\n            <code>maximumSockets</code> |
<code>minimumSockets</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>vCPUs</code> dimension: <code>allowedTenancy</code> | \n
<code>honorVcpuOptimization</code> | \n            <code>maximumVcpus</code> |
<code>minimumVcpus</code>\n            </p>\n          </li>\n        </ul>\n        <p>The unit for
<code>licenseAffinityToHost</code> is days and the range is 1 to 180. The possible \n        values for
<code>allowedTenancy</code> are <code>EC2-Default</code>, <code>EC2-DedicatedHost</code>, and \n
```

<code>EC2-DedicatedInstance</code>. The possible values for <code>honorVcpuOptimization</code> are \n <code>True</code> and <code>False</code>. "
                }
            },

  "Tags": {
                "target": "com.amazonaws.licensemanager#TagList",
                "traits": {
                    "smithy.api#documentation": " Tags to add to the license configuration. "
                }
            },
            "DisassociateWhenNotFound": {
                "target": "com.amazonaws.licensemanager#BoxBoolean",
                "traits": {
                    "smithy.api#documentation": " When true, disassociates a resource when software is uninstalled. "
                }
            },
            "ProductInformationList": {
                "target": "com.amazonaws.licensemanager#ProductInformationList",
                "traits": {
                    "smithy.api#documentation": " Product information. "
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#CreateLicenseConfigurationResponse":
{
        "type": "structure",
        "members": {
            "LicenseConfigurationArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": " Amazon Resource Name (ARN) of the license configuration. "
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#CreateLicenseConversionTaskForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#CreateLicenseConversionTaskForResourceRequest"

```
        },
        "output": {
            "target": "com.amazonaws.licensemanager#CreateLicenseConversionTaskForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
             },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a new license conversion task.</p>"
        }
    },
    "com.amazonaws.licensemanager#CreateLicenseConversionTaskForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {

                "target": "com.amazonaws.licensemanager#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the resource you are converting
the license type for.</p>",
                    "smithy.api#required": {}
                 }
            },
            "SourceLicenseContext": {
                "target": "com.amazonaws.licensemanager#LicenseConversionContext",
                "traits": {
                    "smithy.api#documentation": "<p>Information that identifies the license type you are converting
from. \n\n         For the structure of the source license, see <a href=\"https://docs.aws.amazon.com/license-
manager/latest/userguide/conversion-procedures.html#conversion-cli\">Convert a license type using the CLI </a> in
the <i>License Manager User Guide</i>.</p>",
                    "smithy.api#required": {}
```

```
            }
          },
          "DestinationLicenseContext":
{
            "target": "com.amazonaws.licensemanager#LicenseConversionContext",
            "traits": {
              "smithy.api#documentation": "<p>Information that identifies the license type you are converting to.
For the structure of the destination license, see <a href=\"https://docs.aws.amazon.com/license-
manager/latest/userguide/conversion-procedures.html#conversion-cli\">Convert a license type using the CLI </a> in
the <i>License Manager User Guide</i>.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#CreateLicenseConversionTaskForResourceResponse": {
        "type": "structure",
        "members": {
          "LicenseConversionTaskId": {
            "target": "com.amazonaws.licensemanager#LicenseConversionTaskId",

        "traits": {
              "smithy.api#documentation": "<p>The ID of the created license type conversion task.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#CreateLicenseManagerReportGenerator": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#CreateLicenseManagerReportGeneratorRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#CreateLicenseManagerReportGeneratorResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
```

```
            {
               "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
               "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
               "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
               "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
               "target": "com.amazonaws.licensemanager#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Creates a report generator.</p>"
         }
      },
      "com.amazonaws.licensemanager#CreateLicenseManagerReportGeneratorRequest": {
         "type": "structure",
         "members": {
            "ReportGeneratorName":
{
               "target": "com.amazonaws.licensemanager#ReportGeneratorName",
               "traits": {
                  "smithy.api#documentation": "<p>Name of the report generator.</p>",
                  "smithy.api#required": {}
               }
            },
            "Type": {
               "target": "com.amazonaws.licensemanager#ReportTypeList",
               "traits": {
                  "smithy.api#documentation": "<p>Type of reports to generate. The following report types an be
generated:</p>\n <ul>\n <li>\n <p>License configuration report - Reports the number and
details of consumed licenses for a license configuration.</p>\n </li>\n <li>\n <p>Resource
report - Reports the tracked licenses and resource consumption for a license configuration.</p>\n </li>\n
</ul>",
                  "smithy.api#required": {}

         }
            },
            "ReportContext": {
               "target": "com.amazonaws.licensemanager#ReportContext",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Defines the type of license configuration the report generator tracks.</p>",
              "smithy.api#required": {}
            }
          },
          "ReportFrequency": {
            "target": "com.amazonaws.licensemanager#ReportFrequency",
            "traits": {
              "smithy.api#documentation": "<p>Frequency by which reports are generated.  Reports can be generated daily, monthly, or weekly.</p>",
              "smithy.api#required": {}
            }
          },
          "ClientToken": {
            "target": "com.amazonaws.licensemanager#ClientRequestToken",
            "traits": {
              "smithy.api#documentation": "<p>Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.</p>",
              "smithy.api#required": {}
            }
          },
          "Description": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Description of the report generator.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanager#TagList",
            "traits": {
              "smithy.api#documentation": "<p>Tags to add to the report generator.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#CreateLicenseManagerReportGeneratorResponse": {
        "type": "structure",
        "members": {
          "LicenseManagerReportGeneratorArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the new report generator.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#CreateLicenseRequest": {
        "type": "structure",
        "members": {
          "LicenseName": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>License name.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductName": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Product
name.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductSKU": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Product SKU.</p>",
              "smithy.api#required": {}
            }
          },
          "Issuer": {
            "target": "com.amazonaws.licensemanager#Issuer",
            "traits": {
              "smithy.api#documentation": "<p>License issuer.</p>",
              "smithy.api#required": {}
            }
          },
          "HomeRegion": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Home Region for the license.</p>",
              "smithy.api#required": {}

  }
          },
          "Validity": {
```

```
            "target": "com.amazonaws.licensemanager#DatetimeRange",
            "traits": {
              "smithy.api#documentation": "<p>Date and time range during which the license is valid, in ISO8601-UTC format.</p>",
              "smithy.api#required": {}
            }
          },
          "Entitlements": {
            "target": "com.amazonaws.licensemanager#EntitlementList",
            "traits": {
              "smithy.api#documentation": "<p>License entitlements.</p>",
              "smithy.api#required": {}
            }
          },
          "Beneficiary": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>License beneficiary.</p>",
              "smithy.api#required": {}
            }
          },
          "ConsumptionConfiguration": {
            "target": "com.amazonaws.licensemanager#ConsumptionConfiguration",
            "traits": {
              "smithy.api#documentation": "<p>Configuration for consumption of the license. Choose a provisional configuration for workloads\n running with continuous connectivity. Choose a borrow configuration for workloads with offline\n usage.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseMetadata": {
            "target": "com.amazonaws.licensemanager#MetadataList",
            "traits": {
              "smithy.api#documentation": "<p>Information about the license.</p>"
            }
          },
          "ClientToken": {
            "target": "com.amazonaws.licensemanager#ClientToken",
            "traits": {
              "smithy.api#documentation": "<p>Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
},
"com.amazonaws.licensemanager#CreateLicenseResponse": {
    "type": "structure",
    "members": {
        "LicenseArn": {
            "target": "com.amazonaws.licensemanager#Arn",
            "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>"
            }
        },
        "Status": {
            "target": "com.amazonaws.licensemanager#LicenseStatus",
            "traits": {
                "smithy.api#documentation": "<p>License status.</p>"
            }
        },
        "Version": {
             "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>License version.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanager#CreateLicenseVersion": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanager#CreateLicenseVersionRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanager#CreateLicenseVersionResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
        },
        {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
        },
        {
            "target": "com.amazonaws.licensemanager#ConflictException"
         },
        {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanager#RedirectException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a new version of the specified license.</p>"
        }
    },
    "com.amazonaws.licensemanager#CreateLicenseVersionRequest": {
        "type": "structure",
        "members": {
            "LicenseArn": {
                "target":
"com.amazonaws.licensemanager#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseName": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>License name.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductName": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Product name.</p>",
                    "smithy.api#required": {}
                }
            },
            "Issuer": {
                "target": "com.amazonaws.licensemanager#Issuer",
                "traits":
{
                    "smithy.api#documentation": "<p>License issuer.</p>",
                    "smithy.api#required": {}
```

```
            }
        },
        "HomeRegion": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Home Region of the license.</p>",
                "smithy.api#required": {}
            }
        },
        "Validity": {
            "target": "com.amazonaws.licensemanager#DatetimeRange",
            "traits": {
                "smithy.api#documentation": "<p>Date and time range during which the license is valid, in ISO8601-
UTC format.</p>",
                "smithy.api#required": {}
            }
        },
        "LicenseMetadata": {
            "target": "com.amazonaws.licensemanager#MetadataList",
            "traits": {
                "smithy.api#documentation": "<p>Information about the license.</p>"
            }
        },
        "Entitlements": {
            "target": "com.amazonaws.licensemanager#EntitlementList",
            "traits": {
                "smithy.api#documentation": "<p>License entitlements.</p>",
                "smithy.api#required": {}
            }
        },
        "ConsumptionConfiguration": {
            "target": "com.amazonaws.licensemanager#ConsumptionConfiguration",
            "traits": {
                "smithy.api#documentation": "<p>Configuration for consumption of the license. Choose a provisional
configuration for workloads\n        running with continuous connectivity. Choose a borrow configuration for
workloads with offline\n        usage.</p>",
                "smithy.api#required": {}
            }
        },

    "Status": {
            "target": "com.amazonaws.licensemanager#LicenseStatus",
            "traits": {
                "smithy.api#documentation": "<p>License status.</p>",
                "smithy.api#required": {}
            }
        },
        "ClientToken": {
```

```
            "target": "com.amazonaws.licensemanager#ClientToken",
            "traits": {
              "smithy.api#documentation": "<p>Unique, case-sensitive identifier that you provide to ensure the
idempotency of the request.</p>",
              "smithy.api#required": {}
            }
          },
          "SourceVersion": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Current version of the license.</p>"
            }
          }
        },
        "traits": {

 "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#CreateLicenseVersionResponse": {
        "type": "structure",
        "members": {
          "LicenseArn": {
            "target": "com.amazonaws.licensemanager#Arn",
            "traits": {
              "smithy.api#documentation": "<p>License ARN.</p>"
            }
          },
          "Version": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>New version of the license.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanager#LicenseStatus",
            "traits": {
              "smithy.api#documentation": "<p>License status.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
      "com.amazonaws.licensemanager#CreateToken": {
        "type": "operation",
```

```
      "input": {
        "target": "com.amazonaws.licensemanager#CreateTokenRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanager#CreateTokenResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanager#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanager#AuthorizationException"
        },
        {
          "target": "com.amazonaws.licensemanager#RateLimitExceededException"
        },
        {
          "target": "com.amazonaws.licensemanager#RedirectException"
        },
        {
          "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
        },

    {
          "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanager#ServerInternalException"
        },
        {
          "target": "com.amazonaws.licensemanager#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Creates a long-lived token.</p>\n      <p>A refresh token is a JWT token used to get an access token. With an access token,\n      you can call AssumeRoleWithWebIdentity to get role credentials that you can use to \n      call License Manager to manage the specified license.</p>"
      }
    },
    "com.amazonaws.licensemanager#CreateTokenRequest": {
      "type": "structure",
      "members": {
        "LicenseArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits":
{
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license. The ARN is mapped to the aud claim of the\n      JWT token.</p>",
```

```
                "smithy.api#required": {}
              }
            },
            "RoleArns": {
              "target": "com.amazonaws.licensemanager#ArnList",
              "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the IAM roles to embed in the token. \n        License Manager does not check whether the roles are in use.</p>"
              }
            },
            "ExpirationInDays": {
              "target": "com.amazonaws.licensemanager#Integer",
              "traits": {
                "smithy.api#documentation": "<p>Token expiration, in days, counted from token creation. The default is 365 days.</p>"
              }
            },
            "TokenProperties": {
               "target": "com.amazonaws.licensemanager#MaxSize3StringList",
              "traits": {
                "smithy.api#documentation": "<p>Data specified by the caller to be included in the JWT token. The data is mapped\n          to the amr claim of the JWT token.</p>"
              }
            },
            "ClientToken": {
              "target": "com.amazonaws.licensemanager#ClientToken",
              "traits": {
                "smithy.api#documentation": "<p>Idempotency token, valid for 10 minutes.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanager#CreateTokenResponse": {
          "type": "structure",
          "members": {
            "TokenId": {
              "target": "com.amazonaws.licensemanager#String",

             "traits": {
                "smithy.api#documentation": "<p>Token ID.</p>"
              }
            },
            "TokenType": {
              "target": "com.amazonaws.licensemanager#TokenType",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Token type.</p>"
            }
        },
        "Token": {
            "target": "com.amazonaws.licensemanager#TokenString",
            "traits": {
                "smithy.api#documentation": "<p>Refresh token, encoded as a JWT token.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanager#DateTime": {
    "type": "timestamp"
},
"com.amazonaws.licensemanager#DatetimeRange": {
    "type": "structure",
    "members": {
        "Begin": {
            "target": "com.amazonaws.licensemanager#ISO8601DateTime",
            "traits": {
                "smithy.api#documentation": "<p>Start of the time range.</p>",
                "smithy.api#required": {}
            }
        },
        "End": {
            "target": "com.amazonaws.licensemanager#ISO8601DateTime",
            "traits": {
                "smithy.api#documentation": "<p>End of the time range.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes a time range, in ISO8601-UTC format.</p>"
    }
},
"com.amazonaws.licensemanager#DeleteGrant": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanager#DeleteGrantRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanager#DeleteGrantResponse"
    },
    "errors": [
```

```
            {
              "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
              "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
              "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
              "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
              "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
              "target": "com.amazonaws.licensemanager#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Deletes
the specified grant.</p>"
          }
        },
        "com.amazonaws.licensemanager#DeleteGrantRequest": {
          "type": "structure",
          "members": {
            "GrantArn": {
              "target": "com.amazonaws.licensemanager#Arn",
              "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the grant.</p>",
                "smithy.api#required": {}
              }
            },
            "StatusReason": {
              "target": "com.amazonaws.licensemanager#StatusReasonMessage",
              "traits": {
                "smithy.api#documentation": "<p>The Status reason for the delete request.</p>"
              }
            },
            "Version": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Current version of the
```

```
grant.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#DeleteGrantResponse": {
        "type": "structure",
        "members": {
            "GrantArn": {
                "target": "com.amazonaws.licensemanager#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>Grant ARN.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanager#GrantStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Grant status.</p>"
                }
            },
            "Version": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation":
"<p>Grant version.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#DeleteLicense": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#DeleteLicenseRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#DeleteLicenseResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"

},
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#RedirectException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes the specified license.</p>"
        }
    },
    "com.amazonaws.licensemanager#DeleteLicenseConfiguration": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#DeleteLicenseConfigurationRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#DeleteLicenseConfigurationResponse"
        },

    "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes the specified license configuration.</p>\n         <p>You cannot delete a license configuration that is in use.</p>"
        }
    },
    "com.amazonaws.licensemanager#DeleteLicenseConfigurationRequest": {
        "type": "structure",
        "members":
{
            "LicenseConfigurationArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>ID of the license configuration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#DeleteLicenseConfigurationResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#DeleteLicenseManagerReportGenerator": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#DeleteLicenseManagerReportGeneratorRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#DeleteLicenseManagerReportGeneratorResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
```

```
            {
               "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
               "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
               "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
               "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
               "target": "com.amazonaws.licensemanager#ValidationException"
             }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Deletes the specified report generator.</p>\n         <p>This action deletes the report generator, which stops it from generating future reports.\n         The action cannot be reversed. It has no effect on the previous reports from this generator.</p>"
         }
      },
      "com.amazonaws.licensemanager#DeleteLicenseManagerReportGeneratorRequest": {
         "type": "structure",
         "members": {
            "LicenseManagerReportGeneratorArn": {
               "target": "com.amazonaws.licensemanager#String",
               "traits": {
                  "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the report generator to be deleted.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {

  "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanager#DeleteLicenseManagerReportGeneratorResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
```

```
    },
    "com.amazonaws.licensemanager#DeleteLicenseRequest": {
      "type": "structure",
      "members": {
        "LicenseArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits": {
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>",
            "smithy.api#required": {}
          }
        },
        "SourceVersion": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Current version of the license.</p>",
            "smithy.api#required":
{}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanager#DeleteLicenseResponse": {
      "type": "structure",
      "members": {
        "Status": {
          "target": "com.amazonaws.licensemanager#LicenseDeletionStatus",
          "traits": {
            "smithy.api#documentation": "<p>License status.</p>"
          }
        },
        "DeletionDate": {
          "target": "com.amazonaws.licensemanager#ISO8601DateTime",
          "traits": {
            "smithy.api#documentation": "<p>Date when the license is deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanager#DeleteToken": {
      "type": "operation",
       "input": {
        "target": "com.amazonaws.licensemanager#DeleteTokenRequest"
```

```
        },
        "output": {
          "target": "com.amazonaws.licensemanager#DeleteTokenResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#RedirectException"
          },
          {
            "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          },

    {
            "target": "com.amazonaws.licensemanager#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes the specified token. Must be called in the license home
Region.</p>"
        }
      },
      "com.amazonaws.licensemanager#DeleteTokenRequest": {
        "type": "structure",
        "members": {
          "TokenId": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token ID.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
```

```
    "com.amazonaws.licensemanager#DeleteTokenResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}

      }
    },
    "com.amazonaws.licensemanager#DigitalSignatureMethod": {
      "type": "enum",
      "members": {
        "JWT_PS384": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "JWT_PS384"
          }
        }
      }
    },
    "com.amazonaws.licensemanager#Entitlement": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Entitlement name.</p>",
            "smithy.api#required": {}
          }
        },
        "Value": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Entitlement resource. Use only
if the unit is None.</p>"
          }
        },
        "MaxCount": {
          "target": "com.amazonaws.licensemanager#Long",
          "traits": {
            "smithy.api#documentation": "<p>Maximum entitlement count. Use if the unit is not None.</p>"
          }
        },
        "Overage": {
          "target": "com.amazonaws.licensemanager#BoxBoolean",
          "traits": {
            "smithy.api#documentation": "<p>Indicates whether overages are allowed.</p>"
          }
        },
```

```
            "Unit": {
                "target": "com.amazonaws.licensemanager#EntitlementUnit",
                "traits": {
                    "smithy.api#documentation": "<p>Entitlement unit.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowCheckIn": {
                "target":
"com.amazonaws.licensemanager#BoxBoolean",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates whether check-ins are allowed.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes a resource entitled for use with a license.</p>"
        }
    },
    "com.amazonaws.licensemanager#EntitlementData": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Entitlement data name.</p>",
                    "smithy.api#required": {}
                }
            },
            "Value": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Entitlement
data value.</p>"
                }
            },
            "Unit": {
                "target": "com.amazonaws.licensemanager#EntitlementDataUnit",
                "traits": {
                    "smithy.api#documentation": "<p>Entitlement data unit.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Data associated with an entitlement resource.</p>"
        }
    },
```

```
    "com.amazonaws.licensemanager#EntitlementDataList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#EntitlementData"
      }
    },
    "com.amazonaws.licensemanager#EntitlementDataUnit": {
      "type": "enum",
      "members": {
        "COUNT": {
          "target": "smithy.api#Unit",
          "traits": {

"smithy.api#enumValue": "Count"
          }
        },
        "NONE": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "None"
          }
        },
        "SECONDS": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "Seconds"
          }
        },
        "MICROSECONDS": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "Microseconds"
          }
        },
        "MILLISECONDS": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "Milliseconds"
          }
        },
        "BYTES": {
          "target": "smithy.api#Unit",
           "traits": {
            "smithy.api#enumValue": "Bytes"
          }
        },
        "KILOBYTES": {
          "target": "smithy.api#Unit",
```

```
            "traits": {
                "smithy.api#enumValue": "Kilobytes"
            }
        },
        "MEGABYTES": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Megabytes"
            }
        },
        "GIGABYTES": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Gigabytes"
            }
        },
        "TERABYTES": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Terabytes"
            }
        },
        "BITS":
{
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Bits"
            }
        },
        "KILOBITS": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Kilobits"
            }
        },
        "MEGABITS": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Megabits"
            }
        },
        "GIGABITS": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Gigabits"
            }
        },
        "TERABITS": {
```

```
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Terabits"

    }
        },
        "PERCENT": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Percent"
            }
        },
        "BYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Bytes/Second"
            }
        },
        "KILOBYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Kilobytes/Second"
            }
        },
        "MEGABYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Megabytes/Second"
            }
        },
        "GIGABYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
             "traits": {
                "smithy.api#enumValue": "Gigabytes/Second"
            }
        },
        "TERABYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Terabytes/Second"
            }
        },
        "BITS_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "Bits/Second"
            }
        },
```

```
            "KILOBITS_PER_SECOND": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "Kilobits/Second"
                }
            },
            "MEGABITS_PER_SECOND": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue":
"Megabits/Second"
                }
            },
            "GIGABITS_PER_SECOND": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "Gigabits/Second"
                }
            },
            "TERABITS_PER_SECOND": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "Terabits/Second"
                }
            },
            "COUNT_PER_SECOND": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "Count/Second"
                }
            }
        }
    },
    "com.amazonaws.licensemanager#EntitlementList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanager#Entitlement"
        }
    },
    "com.amazonaws.licensemanager#EntitlementNotAllowedException":
{
        "type": "structure",
        "members": {
            "Message": {
                "target": "com.amazonaws.licensemanager#Message"
            }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>The entitlement is not allowed.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 400
          }
        },
        "com.amazonaws.licensemanager#EntitlementUnit": {
          "type": "enum",
          "members": {
            "COUNT": {
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue": "Count"
              }
            },
            "NONE": {
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue": "None"
              }
            },
            "SECONDS":
{
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue": "Seconds"
              }
            },
            "MICROSECONDS": {
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue": "Microseconds"
              }
            },
            "MILLISECONDS": {
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue": "Milliseconds"
              }
            },
            "BYTES": {
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue": "Bytes"
              }
            },
            "KILOBYTES": {
              "target": "smithy.api#Unit",
              "traits": {
```

```
        "smithy.api#enumValue": "Kilobytes"
      }
    },
    "MEGABYTES": {
      "target": "smithy.api#Unit",
      "traits": {
        "smithy.api#enumValue": "Megabytes"
      }
    },
    "GIGABYTES": {
      "target": "smithy.api#Unit",
      "traits": {
        "smithy.api#enumValue": "Gigabytes"
      }
    },
    "TERABYTES": {
      "target": "smithy.api#Unit",
      "traits": {
        "smithy.api#enumValue": "Terabytes"
      }
    },
    "BITS": {
      "target": "smithy.api#Unit",
      "traits": {
        "smithy.api#enumValue": "Bits"
      }
    },
    "KILOBITS": {
      "target": "smithy.api#Unit",
      "traits": {

       "smithy.api#enumValue": "Kilobits"
      }
    },
    "MEGABITS": {
      "target": "smithy.api#Unit",
      "traits": {
        "smithy.api#enumValue": "Megabits"
      }
    },
    "GIGABITS": {
      "target": "smithy.api#Unit",
      "traits": {
        "smithy.api#enumValue": "Gigabits"
      }
    },
    "TERABITS": {
      "target": "smithy.api#Unit",
```

```
            "traits": {
              "smithy.api#enumValue": "Terabits"
            }
          },
          "PERCENT": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "Percent"
            }
          },
          "BYTES_PER_SECOND": {
            "target":
"smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "Bytes/Second"
            }
          },
          "KILOBYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "Kilobytes/Second"
            }
          },
          "MEGABYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "Megabytes/Second"
            }
          },
          "GIGABYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "Gigabytes/Second"
            }
          },
          "TERABYTES_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {

"smithy.api#enumValue": "Terabytes/Second"
            }
          },
          "BITS_PER_SECOND": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "Bits/Second"
            }
          },
```

```
        "KILOBITS_PER_SECOND": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "Kilobits/Second"
          }
        },
        "MEGABITS_PER_SECOND": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "Megabits/Second"
          }
        },
        "GIGABITS_PER_SECOND": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "Gigabits/Second"
          }
        },

    "TERABITS_PER_SECOND": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "Terabits/Second"
          }
        },
        "COUNT_PER_SECOND": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "Count/Second"
          }
        }
      }
    },
    "com.amazonaws.licensemanager#EntitlementUsage": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Entitlement usage name.</p>",
            "smithy.api#required": {}
          }
        },
        "ConsumedValue": {
          "target": "com.amazonaws.licensemanager#String",

        "traits": {
            "smithy.api#documentation": "<p>Resource usage consumed.</p>",
```

```
            "smithy.api#required": {}
          }
        },
        "MaxCount": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Maximum entitlement usage count.</p>"
          }
        },
        "Unit": {
          "target": "com.amazonaws.licensemanager#EntitlementDataUnit",
          "traits": {
            "smithy.api#documentation": "<p>Entitlement usage unit.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Usage associated with an entitlement resource.</p>"
      }
    },
    "com.amazonaws.licensemanager#EntitlementUsageList":
{
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#EntitlementUsage"
      }
    },
    "com.amazonaws.licensemanager#ExtendLicenseConsumption": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanager#ExtendLicenseConsumptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanager#ExtendLicenseConsumptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanager#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanager#AuthorizationException"
        },
        {
          "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
        },
        {
          "target": "com.amazonaws.licensemanager#RateLimitExceededException"
```

```
        },
        {
          "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanager#ServerInternalException"
        },
        {
          "target": "com.amazonaws.licensemanager#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Extends the expiration date for license consumption.</p>"
      }
    },
    "com.amazonaws.licensemanager#ExtendLicenseConsumptionRequest": {
      "type": "structure",
      "members": {
        "LicenseConsumptionToken": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>License consumption token.</p>",
            "smithy.api#required": {}

    }
        },
        "DryRun": {
          "target": "com.amazonaws.licensemanager#Boolean",
          "traits": {
            "smithy.api#default": false,
            "smithy.api#documentation": "<p>Checks whether you have the required permissions for the action,
without actually making the request. Provides an error response if you do not have the required permissions.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanager#ExtendLicenseConsumptionResponse": {
      "type": "structure",
      "members": {
        "LicenseConsumptionToken": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>License consumption token.</p>"
          }
        },
```

```
            "Expiration": {
              "target": "com.amazonaws.licensemanager#ISO8601DateTime",
              "traits": {
                "smithy.api#documentation": "<p>Date and time at which the license consumption expires.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanager#FailedDependencyException": {
          "type": "structure",
          "members": {
            "Message": {
              "target": "com.amazonaws.licensemanager#Message"
            },
            "ErrorCode": {
              "target": "com.amazonaws.licensemanager#String"
            }
          },
          "traits": {
            "aws.protocols#awsQueryError": {
              "code": "FailedDependency",
              "httpResponseCode": 424
            },
            "smithy.api#documentation":
"<p>A dependency required to run the API is missing.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 424
          }
        },
        "com.amazonaws.licensemanager#Filter": {
          "type": "structure",
          "members": {
            "Name": {
              "target": "com.amazonaws.licensemanager#FilterName",
              "traits": {
                "smithy.api#documentation": "<p>Name of the filter. Filter names are case-sensitive.</p>"
              }
            },
            "Values": {
              "target": "com.amazonaws.licensemanager#FilterValues",
              "traits": {
                "smithy.api#documentation": "<p>The value of the filter, which is case-sensitive. You can only
specify one value for the filter.</p>"
              }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter
 name and value pair that is used to return more specific results from a\n          describe operation. Filters can be used
to match a set of resources by specific criteria,\n          such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanager#FilterLimitExceededException": {
        "type": "structure",
        "members": {
            "Message": {
                "target": "com.amazonaws.licensemanager#Message"
            }
        },
        "traits": {
            "aws.protocols#awsQueryError": {
                "code": "FilterLimitExceeded",
                "httpResponseCode": 400
            },
            "smithy.api#documentation": "<p>The request uses too many filters or too many filter values.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 400
        }
    },
    "com.amazonaws.licensemanager#FilterList": {
        "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanager#Filter"
        }
    },
    "com.amazonaws.licensemanager#FilterName": {
        "type": "string"
    },
    "com.amazonaws.licensemanager#FilterValue": {
        "type": "string"
    },
    "com.amazonaws.licensemanager#FilterValues": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanager#FilterValue",
            "traits": {
                "smithy.api#xmlName": "item"
            }
        }
    },
    "com.amazonaws.licensemanager#Filters": {
        "type": "list",
```

```
        "member": {
          "target": "com.amazonaws.licensemanager#Filter",
          "traits": {
            "smithy.api#xmlName": "item"
          }
        }
      },
      "com.amazonaws.licensemanager#GetAccessToken": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#GetAccessTokenRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#GetAccessTokenResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          },
          {
            "target": "com.amazonaws.licensemanager#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Gets a temporary access token to use with
AssumeRoleWithWebIdentity. Access
 tokens\n        are valid for one hour.</p>"
        }
      },
      "com.amazonaws.licensemanager#GetAccessTokenRequest": {
        "type": "structure",
        "members": {
          "Token": {
            "target": "com.amazonaws.licensemanager#TokenString",
            "traits": {
              "smithy.api#documentation": "<p>Refresh token, encoded as a JWT token.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "TokenProperties": {
               "target": "com.amazonaws.licensemanager#MaxSize3StringList",
               "traits": {
                  "smithy.api#documentation": "<p>Token properties to validate against those present in the JWT
token.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanager#GetAccessTokenResponse":
{
         "type": "structure",
         "members": {
            "AccessToken": {
               "target": "com.amazonaws.licensemanager#TokenString",
               "traits": {
                  "smithy.api#documentation": "<p>Temporary access token.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanager#GetGrant": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanager#GetGrantRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanager#GetGrantResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanager#AuthorizationException"

        },
            {
               "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
               "target": "com.amazonaws.licensemanager#RateLimitExceededException"
```

```
        },
        {
          "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
        },
        {
          "target": "com.amazonaws.licensemanager#ServerInternalException"
        },
        {
          "target": "com.amazonaws.licensemanager#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Gets detailed information about the specified grant.</p>"
      }
    },
    "com.amazonaws.licensemanager#GetGrantRequest": {
      "type": "structure",
      "members": {
        "GrantArn": {
          "target": "com.amazonaws.licensemanager#Arn",
           "traits": {
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the grant.</p>",
            "smithy.api#required": {}
          }
        },
        "Version": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Grant version.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanager#GetGrantResponse": {
      "type": "structure",
      "members": {
        "Grant": {
          "target": "com.amazonaws.licensemanager#Grant",
          "traits": {
            "smithy.api#documentation": "<p>Grant details.</p>"
          }
        }
      },
      "traits": {
```

```
"smithy.api#output": {}
    }
},
"com.amazonaws.licensemanager#GetLicense": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanager#GetLicenseRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanager#GetLicenseResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
        },
        {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
        },
        {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
        },
        {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
        },
        {
            "target": "com.amazonaws.licensemanager#ServerInternalException"

 },
        {
            "target": "com.amazonaws.licensemanager#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Gets detailed information about the specified license.</p>"
    }
},
"com.amazonaws.licensemanager#GetLicenseConfiguration": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanager#GetLicenseConfigurationRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanager#GetLicenseConfigurationResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
             },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Gets detailed information about the specified license
configuration.</p>"
        }
    },
    "com.amazonaws.licensemanager#GetLicenseConfigurationRequest": {
        "type": "structure",
        "members": {
            "LicenseConfigurationArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license
configuration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits":
{
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#GetLicenseConfigurationResponse": {
        "type": "structure",
        "members": {
            "LicenseConfigurationId": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Unique ID for the license configuration.</p>"
                }
            },
            "LicenseConfigurationArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license configuration.</p>"
```

```
    }
  },
  "Name": {
    "target": "com.amazonaws.licensemanager#String",
    "traits": {
      "smithy.api#documentation": "<p>Name of the license configuration.</p>"
     }
  },
  "Description": {
    "target": "com.amazonaws.licensemanager#String",
    "traits": {
      "smithy.api#documentation": "<p>Description of the license configuration.</p>"
    }
  },
  "LicenseCountingType": {
    "target": "com.amazonaws.licensemanager#LicenseCountingType",
    "traits": {
      "smithy.api#documentation": "<p>Dimension for which the licenses are counted.</p>"
    }
  },
  "LicenseRules": {
    "target": "com.amazonaws.licensemanager#StringList",
    "traits": {
      "smithy.api#documentation": "<p>License rules.</p>"
    }
  },
  "LicenseCount": {
    "target": "com.amazonaws.licensemanager#BoxLong",

   "traits": {
      "smithy.api#documentation": "<p>Number of available licenses.</p>"
    }
  },
  "LicenseCountHardLimit": {
    "target": "com.amazonaws.licensemanager#BoxBoolean",
    "traits": {
      "smithy.api#documentation": "<p>Sets the number of available licenses as a hard limit.</p>"
    }
  },
  "ConsumedLicenses": {
    "target": "com.amazonaws.licensemanager#BoxLong",
    "traits": {
      "smithy.api#documentation": "<p>Number of licenses assigned to resources.</p>"
    }
  },
  "Status": {
    "target": "com.amazonaws.licensemanager#String",
    "traits": {
```

```
            "smithy.api#documentation": "<p>License configuration status.</p>"
          }

      },
        "OwnerAccountId": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Account ID of the owner of the license configuration.</p>"
          }
        },
        "ConsumedLicenseSummaryList": {
          "target": "com.amazonaws.licensemanager#ConsumedLicenseSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>Summaries of the licenses consumed by resources.</p>"
          }
        },
        "ManagedResourceSummaryList": {
          "target": "com.amazonaws.licensemanager#ManagedResourceSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>Summaries of the managed resources.</p>"
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanager#TagList",
           "traits": {
            "smithy.api#documentation": "<p>Tags for the license configuration.</p>"
          }
        },
        "ProductInformationList": {
          "target": "com.amazonaws.licensemanager#ProductInformationList",
          "traits": {
            "smithy.api#documentation": "<p>Product information.</p>"
          }
        },
        "AutomatedDiscoveryInformation": {
          "target": "com.amazonaws.licensemanager#AutomatedDiscoveryInformation",
          "traits": {
            "smithy.api#documentation": "<p>Automated discovery information.</p>"
          }
        },
        "DisassociateWhenNotFound": {
          "target": "com.amazonaws.licensemanager#BoxBoolean",
          "traits": {
            "smithy.api#documentation": "<p>When
true, disassociates a resource when software is uninstalled.</p>"
          }
        }
      },
```

```
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#GetLicenseConversionTask": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#GetLicenseConversionTaskRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#GetLicenseConversionTaskResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {

 "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Gets information about the specified license type conversion task.</p>"
        }
    },
    "com.amazonaws.licensemanager#GetLicenseConversionTaskRequest": {
        "type": "structure",
        "members": {
            "LicenseConversionTaskId": {
                "target": "com.amazonaws.licensemanager#LicenseConversionTaskId",
                "traits": {
                    "smithy.api#documentation": "<p>ID of the license type conversion task to retrieve information
on.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanager#GetLicenseConversionTaskResponse": {
        "type": "structure",
        "members": {
          "LicenseConversionTaskId": {
            "target": "com.amazonaws.licensemanager#LicenseConversionTaskId",
            "traits": {
              "smithy.api#documentation": "<p>ID of the license type conversion task.</p>"
            }
          },
          "ResourceArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Names (ARN) of the resources the license
conversion task is associated with.</p>"
            }
          },
          "SourceLicenseContext": {
            "target": "com.amazonaws.licensemanager#LicenseConversionContext",
            "traits": {
              "smithy.api#documentation": "<p>Information
 about the license type converted from.</p>"
            }
          },
          "DestinationLicenseContext": {
            "target": "com.amazonaws.licensemanager#LicenseConversionContext",
            "traits": {
              "smithy.api#documentation": "<p>Information about the license type converted to.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for the conversion task.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanager#LicenseConversionTaskStatus",
            "traits": {
              "smithy.api#documentation": "<p>Status of the license type conversion task.</p>"
            }
          },

    "StartTime": {
            "target": "com.amazonaws.licensemanager#DateTime",
            "traits": {
              "smithy.api#documentation": "<p>Time at which the license type conversion task was started .</p>"
```

```
            }
          },
          "LicenseConversionTime": {
            "target": "com.amazonaws.licensemanager#DateTime",
            "traits": {
              "smithy.api#documentation": "<p>Amount of time to complete the license type conversion.</p>"
            }
          },
          "EndTime": {
            "target": "com.amazonaws.licensemanager#DateTime",
            "traits": {
              "smithy.api#documentation": "<p>Time at which the license type conversion task was
completed.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#GetLicenseManagerReportGenerator":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#GetLicenseManagerReportGeneratorRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#GetLicenseManagerReportGeneratorResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"

        },
          {
            "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Gets information about the specified report generator.</p>"
        }
    },
    "com.amazonaws.licensemanager#GetLicenseManagerReportGeneratorRequest": {
        "type": "structure",
        "members": {
            "LicenseManagerReportGeneratorArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the report generator.</p>",
                    "smithy.api#required":
{}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#GetLicenseManagerReportGeneratorResponse": {
        "type": "structure",
        "members": {
            "ReportGenerator": {
                "target": "com.amazonaws.licensemanager#ReportGenerator",
                "traits": {
                    "smithy.api#documentation": "<p>A report generator that creates periodic reports about your license
configurations.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#GetLicenseRequest": {
        "type": "structure",
        "members": {
            "LicenseArn": {
                "target": "com.amazonaws.licensemanager#Arn",
```

```
            "traits": {

"smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>",
                "smithy.api#required": {}
            }
          },
          "Version": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>License version.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#GetLicenseResponse": {
        "type": "structure",
        "members": {
          "License": {
            "target": "com.amazonaws.licensemanager#License",
            "traits": {
              "smithy.api#documentation": "<p>License details.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },

    "com.amazonaws.licensemanager#GetLicenseUsage": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#GetLicenseUsageRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#GetLicenseUsageResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {

  "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Gets detailed information about the usage of the specified license.</p>"
        }
    },
    "com.amazonaws.licensemanager#GetLicenseUsageRequest": {
        "type": "structure",
        "members": {
            "LicenseArn": {
                "target": "com.amazonaws.licensemanager#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#GetLicenseUsageResponse": {
        "type": "structure",
        "members": {
            "LicenseUsage": {
                "target":
"com.amazonaws.licensemanager#LicenseUsage",
                "traits": {
                    "smithy.api#documentation": "<p>License usage details.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#GetServiceSettings": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
             },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Gets the License Manager settings for the current Region.</p>"
        }
    },
    "com.amazonaws.licensemanager#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "S3BucketArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Regional S3 bucket path for storing reports, license trail event data,
discovery data,\n        and so on.</p>"

 }
            },
            "SnsTopicArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>SNS topic configured to receive notifications from License
Manager.</p>"
```

```
            }
          },
          "OrganizationConfiguration": {
            "target": "com.amazonaws.licensemanager#OrganizationConfiguration",
            "traits": {
              "smithy.api#documentation": "<p>Indicates whether Organizations is integrated with License
Manager for\n        cross-account discovery.</p>"
            }
          },
          "EnableCrossAccountsDiscovery": {
            "target": "com.amazonaws.licensemanager#BoxBoolean",
            "traits": {
              "smithy.api#documentation": "<p>Indicates whether cross-account discovery is enabled.</p>"
            }

        },
          "LicenseManagerResourceShareArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the resource share. The License
Manager management account \n        provides member accounts with access to this share.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#Grant": {
        "type": "structure",
        "members": {
          "GrantArn": {
            "target": "com.amazonaws.licensemanager#Arn",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the grant.</p>",
              "smithy.api#required": {}
            }
          },
          "GrantName": {

 "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Grant name.</p>",
              "smithy.api#required": {}
            }
          },
          "ParentArn": {
            "target": "com.amazonaws.licensemanager#Arn",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Parent ARN.</p>",
                "smithy.api#required": {}
            }
        },
        "LicenseArn": {
            "target": "com.amazonaws.licensemanager#Arn",
            "traits": {
                "smithy.api#documentation": "<p>License ARN.</p>",
                "smithy.api#required": {}
            }
        },
        "GranteePrincipalArn": {
            "target": "com.amazonaws.licensemanager#Arn",
            "traits": {

"smithy.api#documentation": "<p>The grantee principal ARN.</p>",
                "smithy.api#required": {}
            }
        },
        "HomeRegion": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Home Region of the grant.</p>",
                "smithy.api#required": {}
            }
        },
        "GrantStatus": {
            "target": "com.amazonaws.licensemanager#GrantStatus",
            "traits": {
                "smithy.api#documentation": "<p>Grant status.</p>",
                "smithy.api#required": {}
            }
        },
        "StatusReason": {
            "target": "com.amazonaws.licensemanager#StatusReasonMessage",
            "traits": {
                "smithy.api#documentation": "<p>Grant status reason.</p>"
             }
        },
        "Version": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Grant version.</p>",
                "smithy.api#required": {}
            }
        },
        "GrantedOperations": {
```

```
            "target": "com.amazonaws.licensemanager#AllowedOperationList",
            "traits": {
              "smithy.api#documentation": "<p>Granted operations.</p>",
              "smithy.api#required": {}
            }
          },
          "Options": {
            "target": "com.amazonaws.licensemanager#Options",
            "traits": {
              "smithy.api#documentation": "<p>The options specified for the grant.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
"<p>Describes a grant.</p>"
        }
      },
      "com.amazonaws.licensemanager#GrantList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#Grant"
        }
      },
      "com.amazonaws.licensemanager#GrantStatus": {
        "type": "enum",
        "members": {
          "PENDING_WORKFLOW": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "PENDING_WORKFLOW"
            }
          },
          "PENDING_ACCEPT": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "PENDING_ACCEPT"
            }
          },
          "REJECTED": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "REJECTED"

            }
          },
          "ACTIVE": {
            "target": "smithy.api#Unit",
```

```
            "traits": {
              "smithy.api#enumValue": "ACTIVE"
            }
          },
          "FAILED_WORKFLOW": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "FAILED_WORKFLOW"
            }
          },
          "DELETED": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "DELETED"
            }
          },
          "PENDING_DELETE": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "PENDING_DELETE"
            }
          },
          "DISABLED": {
            "target": "smithy.api#Unit",
            "traits":
{
              "smithy.api#enumValue": "DISABLED"
            }
          },
          "WORKFLOW_COMPLETED": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "WORKFLOW_COMPLETED"
            }
          }
        }
      },
      "com.amazonaws.licensemanager#GrantedLicense": {
        "type": "structure",
        "members": {
          "LicenseArn": {
            "target": "com.amazonaws.licensemanager#Arn",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>"
            }
          },
          "LicenseName": {
            "target": "com.amazonaws.licensemanager#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>License name.</p>"
            }

    },
        "ProductName": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Product name.</p>"
            }
        },
        "ProductSKU": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Product SKU.</p>"
            }
        },
        "Issuer": {
            "target": "com.amazonaws.licensemanager#IssuerDetails",
            "traits": {
                "smithy.api#documentation": "<p>Granted license issuer.</p>"
            }
        },
        "HomeRegion": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Home Region of the granted license.</p>"

            }
        },
        "Status": {
            "target": "com.amazonaws.licensemanager#LicenseStatus",
            "traits": {
                "smithy.api#documentation": "<p>Granted license status.</p>"
            }
        },
        "Validity": {
            "target": "com.amazonaws.licensemanager#DatetimeRange",
            "traits": {
                "smithy.api#documentation": "<p>Date and time range during which the granted license is valid, in
ISO8601-UTC format.</p>"
            }
        },
        "Beneficiary": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Granted license beneficiary.</p>"
            }
```

```
        },
        "Entitlements": {
          "target": "com.amazonaws.licensemanager#EntitlementList",
           "traits": {
             "smithy.api#documentation": "<p>License entitlements.</p>"
          }
        },
        "ConsumptionConfiguration": {
          "target": "com.amazonaws.licensemanager#ConsumptionConfiguration",
          "traits": {
             "smithy.api#documentation": "<p>Configuration for consumption of the license.</p>"
          }
        },
        "LicenseMetadata": {
          "target": "com.amazonaws.licensemanager#MetadataList",
          "traits": {
             "smithy.api#documentation": "<p>Granted license metadata.</p>"
          }
        },
        "CreateTime": {
          "target": "com.amazonaws.licensemanager#ISO8601DateTime",
          "traits": {
             "smithy.api#documentation": "<p>Creation time of the granted license.</p>"

}
        },
        "Version": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
             "smithy.api#documentation": "<p>Version of the granted license.</p>"
          }
        },
        "ReceivedMetadata": {
          "target": "com.amazonaws.licensemanager#ReceivedMetadata",
          "traits": {
             "smithy.api#documentation": "<p>Granted license received metadata.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes a license that is granted to a grantee.</p>"
      }
    },
    "com.amazonaws.licensemanager#GrantedLicenseList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#GrantedLicense"
      }
```

```
    },
    "com.amazonaws.licensemanager#ISO8601DateTime":
{
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#pattern": "^(-?(?:[1-9][0-9]*)?[0-9]{4})-(1[0-2]|0[1-9])-(3[0-1]|0[1-9]|[1-2][0-9])T(2[0-3]|[0-
1][0-9]):([0-5][0-9]):([0-5][0-9])(\\.[0-9]+)?(Z|[+-](?:2[ 0-3]|[0-1][0-9]):[0-5][0-9])+$"
        }
    },
    "com.amazonaws.licensemanager#Integer": {
        "type": "integer"
    },
    "com.amazonaws.licensemanager#InvalidParameterValueException": {
        "type": "structure",
        "members": {
            "Message": {
                "target": "com.amazonaws.licensemanager#Message"
            }
        },
        "traits": {
            "aws.protocols#awsQueryError": {
                "code": "InvalidParameterValueProvided",
                "httpResponseCode": 400
            },
            "smithy.api#documentation":
"<p>One or more parameter values are not valid.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 400
        }
    },
    "com.amazonaws.licensemanager#InvalidResourceStateException": {
        "type": "structure",
        "members": {
            "Message": {
                "target": "com.amazonaws.licensemanager#Message"
            }
        },
        "traits": {
            "aws.protocols#awsQueryError": {
                "code": "InvalidResourceState",
                "httpResponseCode": 400
            },
            "smithy.api#documentation": "<p>License Manager cannot allocate a license to a resource because of its
state. </p>\n         <p>For example, you cannot allocate a license to an instance in the process of shutting\n
```

```
down.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 400
        }
      },

    "com.amazonaws.licensemanager#InventoryFilter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Name of the filter.</p>",
              "smithy.api#required": {}
            }
          },
          "Condition": {
            "target": "com.amazonaws.licensemanager#InventoryFilterCondition",
            "traits": {
              "smithy.api#documentation": "<p>Condition of the filter.</p>",
              "smithy.api#required": {}
            }
          },
          "Value": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }

    },
        "traits": {
          "smithy.api#documentation": "<p>An inventory filter.</p>"
        }
      },
     "com.amazonaws.licensemanager#InventoryFilterCondition": {
        "type": "enum",
        "members": {
          "EQUALS": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "EQUALS"
            }
          },
          "NOT_EQUALS": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "NOT_EQUALS"
```

```
            }
          },
          "BEGINS_WITH": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "BEGINS_WITH"
            }
          },
          "CONTAINS": {
            "target": "smithy.api#Unit",
            "traits": {
               "smithy.api#enumValue": "CONTAINS"
            }
          }
        }
      },
      "com.amazonaws.licensemanager#InventoryFilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#InventoryFilter"
        }
      },
      "com.amazonaws.licensemanager#Issuer": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Issuer name.</p>",
              "smithy.api#required": {}
            }
          },
          "SignKey": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Asymmetric KMS key from Key Management Service. The KMS
key must have a key usage
 of sign and verify, \n         and support the RSASSA-PSS SHA-256 signing algorithm.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about the issuer of a license.</p>"
        }
      },
      "com.amazonaws.licensemanager#IssuerDetails": {
        "type": "structure",
        "members": {
```

```
            "Name": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Issuer name.</p>"
              }
            },
            "SignKey": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Asymmetric KMS key from Key Management Service. The KMS key must have a key usage of sign and verify, \n          and support the RSASSA-PSS SHA-256 signing algorithm.</p>"
              }
            },
            "KeyFingerprint": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Issuer key fingerprint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Details associated with the issuer of a license.</p>"
          }
        },
        "com.amazonaws.licensemanager#License": {
          "type": "structure",
          "members": {
            "LicenseArn": {
              "target": "com.amazonaws.licensemanager#Arn",
              "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>"
              }
            },
            "LicenseName": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {

             "smithy.api#documentation": "<p>License name.</p>"
              }
            },
            "ProductName": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Product name.</p>"
              }
            },
            "ProductSKU": {
```

```
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Product SKU.</p>"
            }
          },
          "Issuer": {
            "target": "com.amazonaws.licensemanager#IssuerDetails",
            "traits": {
              "smithy.api#documentation": "<p>License issuer.</p>"
            }
          },
          "HomeRegion": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {

          "smithy.api#documentation": "<p>Home Region of the license.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanager#LicenseStatus",
            "traits": {
              "smithy.api#documentation": "<p>License status.</p>"
            }
          },
          "Validity": {
            "target": "com.amazonaws.licensemanager#DatetimeRange",
            "traits": {
              "smithy.api#documentation": "<p>Date and time range during which the license is valid, in ISO8601-
UTC format.</p>"
            }
          },
          "Beneficiary": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>License beneficiary.</p>"
            }
          },
          "Entitlements": {

   "target": "com.amazonaws.licensemanager#EntitlementList",
            "traits": {
              "smithy.api#documentation": "<p>License entitlements.</p>"
            }
          },
          "ConsumptionConfiguration": {
            "target": "com.amazonaws.licensemanager#ConsumptionConfiguration",
            "traits": {
              "smithy.api#documentation": "<p>Configuration for consumption of the license.</p>"
```

```
            }
          },
          "LicenseMetadata": {
            "target": "com.amazonaws.licensemanager#MetadataList",
            "traits": {
              "smithy.api#documentation": "<p>License metadata.</p>"
            }
          },
          "CreateTime": {
            "target": "com.amazonaws.licensemanager#ISO8601DateTime",
            "traits": {
              "smithy.api#documentation": "<p>License
creation time.</p>"
            }
          },
          "Version": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>License version.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Software license that is managed in License Manager.</p>"
        }
      },
      "com.amazonaws.licensemanager#LicenseConfiguration": {
        "type": "structure",
        "members": {
          "LicenseConfigurationId": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Unique ID of the license configuration.</p>"
            }
          },
          "LicenseConfigurationArn": {
            "target": "com.amazonaws.licensemanager#String",
             "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license configuration.</p>"
            }
          },
          "Name": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Name of the license configuration.</p>"
            }
          },
          "Description": {
```

```
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Description of the license configuration.</p>"
            }
          },
          "LicenseCountingType": {
            "target": "com.amazonaws.licensemanager#LicenseCountingType",
            "traits": {
              "smithy.api#documentation": "<p>Dimension to use to track the license inventory.</p>"
             }
          },
          "LicenseRules": {
            "target": "com.amazonaws.licensemanager#StringList",
            "traits": {
              "smithy.api#documentation": "<p>License rules.</p>"
            }
          },
          "LicenseCount": {
            "target": "com.amazonaws.licensemanager#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>Number of licenses managed by the license configuration.</p>"
            }
          },
          "LicenseCountHardLimit": {
            "target": "com.amazonaws.licensemanager#BoxBoolean",
            "traits": {
              "smithy.api#documentation": "<p>Number of available licenses as a hard limit.</p>"
            }
          },
          "DisassociateWhenNotFound": {
            "target": "com.amazonaws.licensemanager#BoxBoolean",
             "traits": {
              "smithy.api#documentation": "<p>When true, disassociates a resource when software is
uninstalled.</p>"
            }
          },
          "ConsumedLicenses": {
            "target": "com.amazonaws.licensemanager#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>Number of licenses consumed. </p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Status of the license configuration.</p>"
            }
          },
```

```
            "OwnerAccountId": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Account ID of the license configuration's owner.</p>"

            }
            },
            "ConsumedLicenseSummaryList": {
              "target": "com.amazonaws.licensemanager#ConsumedLicenseSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Summaries for licenses consumed by various resources.</p>"
              }
            },
            "ManagedResourceSummaryList": {
              "target": "com.amazonaws.licensemanager#ManagedResourceSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Summaries for managed resources.</p>"
              }
            },
            "ProductInformationList": {
              "target": "com.amazonaws.licensemanager#ProductInformationList",
              "traits": {
                "smithy.api#documentation": "<p>Product information.</p>"
              }
            },
            "AutomatedDiscoveryInformation": {

              "target": "com.amazonaws.licensemanager#AutomatedDiscoveryInformation",
              "traits": {
                "smithy.api#documentation": "<p>Automated discovery information.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A license configuration is an abstraction of a customer license
agreement that can be\n        consumed and enforced by License Manager. Components include specifications for
the license\n        type (licensing by instance, socket, CPU, or vCPU), allowed tenancy (shared tenancy, \n
Dedicated Instance, Dedicated Host, or all of these), host affinity (how long a VM\n        must be associated with a
host), and the number of licenses purchased and used.</p>"
          }
        },
        "com.amazonaws.licensemanager#LicenseConfigurationAssociation": {
          "type": "structure",
          "members": {
            "ResourceArn":
{
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
```

```
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the resource.</p>"
              }
            },
            "ResourceType": {
              "target": "com.amazonaws.licensemanager#ResourceType",
              "traits": {
                "smithy.api#documentation": "<p>Type of server resource.</p>"
              }
            },
            "ResourceOwnerId": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>ID of the Amazon Web Services account that owns the resource consuming licenses.</p>"
              }
            },
            "AssociationTime": {
              "target": "com.amazonaws.licensemanager#DateTime",
              "traits": {

    "smithy.api#documentation": "<p>Time when the license configuration was associated with the resource.</p>"
              }
            },
            "AmiAssociationScope": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Scope of AMI associations. The possible value is <code>cross-account</code>.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an association with a license configuration.</p>"
          }
        },
        "com.amazonaws.licensemanager#LicenseConfigurationAssociations": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanager#LicenseConfigurationAssociation"
          }
        },
        "com.amazonaws.licensemanager#LicenseConfigurationStatus": {
          "type": "enum",
          "members":
 {
            "AVAILABLE": {
              "target": "smithy.api#Unit",
              "traits": {
```

```
                "smithy.api#enumValue": "AVAILABLE"
              }
            },
            "DISABLED": {
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue": "DISABLED"
              }
            }
          }
        },
        "com.amazonaws.licensemanager#LicenseConfigurationUsage": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the resource.</p>"
              }
            },
            "ResourceType": {
              "target": "com.amazonaws.licensemanager#ResourceType",
              "traits":
{
                "smithy.api#documentation": "<p>Type of resource.</p>"
              }
            },
            "ResourceStatus": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Status of the resource.</p>"
              }
            },
            "ResourceOwnerId": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>ID of the account that owns the resource.</p>"
              }
            },
            "AssociationTime": {
              "target": "com.amazonaws.licensemanager#DateTime",
              "traits": {
                "smithy.api#documentation": "<p>Time when the license configuration was initially associated with
the resource.</p>"
              }
            },
```

```
    "ConsumedLicenses": {
            "target": "com.amazonaws.licensemanager#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>Number of licenses consumed by the resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about the usage of a resource associated with a license
configuration.</p>"
        }
      },
      "com.amazonaws.licensemanager#LicenseConfigurationUsageList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#LicenseConfigurationUsage"
        }
      },
      "com.amazonaws.licensemanager#LicenseConfigurations": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#LicenseConfiguration"
        }
      },
      "com.amazonaws.licensemanager#LicenseConversionContext": {

    "type": "structure",
        "members": {
          "UsageOperation": {
            "target": "com.amazonaws.licensemanager#UsageOperation",
            "traits": {
              "smithy.api#documentation": "<p>The Usage operation value that corresponds to the license type you
are converting your resource from.  For more information about which platforms correspond to which usage
operation values see <a href=\"https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/billing-info-
fields.html#billing-info\">Sample data: usage operation by platform\n      </a>\n        </p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a license type conversion task.</p>"
        }
      },
      "com.amazonaws.licensemanager#LicenseConversionTask": {
        "type": "structure",
        "members": {
          "LicenseConversionTaskId": {
```

```
        "target": "com.amazonaws.licensemanager#LicenseConversionTaskId",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the license type conversion task.</p>"
            }
          },
          "ResourceArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource associated
with the license type\n        conversion task.</p>"
            }
          },
          "SourceLicenseContext": {
            "target": "com.amazonaws.licensemanager#LicenseConversionContext",
            "traits": {
              "smithy.api#documentation": "<p>Information about the license type this conversion task converted
from.</p>"
            }
          },
          "DestinationLicenseContext": {
            "target":
 "com.amazonaws.licensemanager#LicenseConversionContext",
            "traits": {
              "smithy.api#documentation": "<p>Information about the license type this conversion task converted
to.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanager#LicenseConversionTaskStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the conversion task.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for the conversion task.</p>"
            }
          },
          "StartTime": {
            "target": "com.amazonaws.licensemanager#DateTime",
            "traits": {
              "smithy.api#documentation":
 "<p>The time the conversion task was started at.</p>"
            }
          },
          "LicenseConversionTime": {
            "target": "com.amazonaws.licensemanager#DateTime",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The time the usage operation value of the resource was changed.</p>"
            }
        },
        "EndTime": {
            "target": "com.amazonaws.licensemanager#DateTime",
            "traits": {
                "smithy.api#documentation": "<p>The time the conversion task was completed.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Information about a license type conversion task.</p>"
    }
},
"com.amazonaws.licensemanager#LicenseConversionTaskId": {
    "type": "string",
    "traits": {

   "smithy.api#length": {
            "min": 0,
            "max": 50
        },
        "smithy.api#pattern": "^lct-[a-zA-Z0-9]*$"
    }
},
"com.amazonaws.licensemanager#LicenseConversionTaskStatus": {
    "type": "enum",
    "members": {
        "IN_PROGRESS": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "IN_PROGRESS"
            }
        },
        "SUCCEEDED": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "SUCCEEDED"
            }
        },
        "FAILED": {
            "target": "smithy.api#Unit",
            "traits": {
                "smithy.api#enumValue": "FAILED"
            }
        }
```

```
        }
    },
    "com.amazonaws.licensemanager#LicenseConversionTasks":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanager#LicenseConversionTask"
        }
    },
    "com.amazonaws.licensemanager#LicenseCountingType": {
        "type": "enum",
        "members": {
            "VCPU": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "vCPU"
                }
            },
            "INSTANCE": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "Instance"
                }
            },
            "CORE": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "Core"
                }
            },
            "SOCKET": {
                "target": "smithy.api#Unit",
                 "traits": {
                    "smithy.api#enumValue": "Socket"
                }
            }
        }
    },
    "com.amazonaws.licensemanager#LicenseDeletionStatus": {
        "type": "enum",
        "members": {
            "PENDING_DELETE": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "PENDING_DELETE"
                }
            },
            "DELETED": {
```

```
            "target": "smithy.api#Unit",
            "traits": {
               "smithy.api#enumValue": "DELETED"
            }
         }
      }
   },
"com.amazonaws.licensemanager#LicenseList": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanager#License"
   }
},
"com.amazonaws.licensemanager#LicenseOperationFailure": {

   "type": "structure",
   "members": {
      "ResourceArn": {
         "target": "com.amazonaws.licensemanager#String",
         "traits": {
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the resource.</p>"
         }
      },
      "ResourceType": {
         "target": "com.amazonaws.licensemanager#ResourceType",
         "traits": {
            "smithy.api#documentation": "<p>Resource type.</p>"
         }
      },
      "ErrorMessage": {
         "target": "com.amazonaws.licensemanager#String",
         "traits": {
            "smithy.api#documentation": "<p>Error message.</p>"
         }
      },
      "FailureTime": {
         "target": "com.amazonaws.licensemanager#DateTime",
         "traits": {

"smithy.api#documentation": "<p>Failure time.</p>"
         }
      },
      "OperationName": {
         "target": "com.amazonaws.licensemanager#String",
         "traits": {
            "smithy.api#documentation": "<p>Name of the operation.</p>"
         }
      },
```

```
            "ResourceOwnerId": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>ID of the Amazon Web Services account that owns the
resource.</p>"
              }
            },
            "OperationRequestedBy": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>The requester is \"License Manager Automated Discovery\".</p>"
              }
            },
            "MetadataList": {

              "target": "com.amazonaws.licensemanager#MetadataList",
              "traits": {
                "smithy.api#documentation": "<p>Reserved.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes the failure of a license operation.</p>"
          }
        },
        "com.amazonaws.licensemanager#LicenseOperationFailureList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanager#LicenseOperationFailure"
          }
        },
        "com.amazonaws.licensemanager#LicenseSpecification": {
          "type": "structure",
          "members": {
            "LicenseConfigurationArn": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license
configuration.</p>",

                "smithy.api#required": {}
              }
            },
            "AmiAssociationScope": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Scope of AMI associations. The possible value is <code>cross-
account</code>.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details for associating a license configuration with a resource.</p>"
        }
      },
      "com.amazonaws.licensemanager#LicenseSpecifications": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#LicenseSpecification"
        }
      },
      "com.amazonaws.licensemanager#LicenseStatus": {
        "type": "enum",
        "members": {
          "AVAILABLE": {
            "target": "smithy.api#Unit",

          "traits": {
              "smithy.api#enumValue": "AVAILABLE"
            }
          },
          "PENDING_AVAILABLE": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "PENDING_AVAILABLE"
            }
          },
          "DEACTIVATED": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "DEACTIVATED"
            }
          },
          "SUSPENDED": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "SUSPENDED"
            }
          },
          "EXPIRED": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "EXPIRED"
            }
          },
```

```
        "PENDING_DELETE": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "PENDING_DELETE"
            }
          },
          "DELETED": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "DELETED"
            }
          }
        }
      },
      "com.amazonaws.licensemanager#LicenseUsage": {
        "type": "structure",
        "members": {
          "EntitlementUsages": {
            "target": "com.amazonaws.licensemanager#EntitlementUsageList",
            "traits": {
              "smithy.api#documentation": "<p>License entitlement usages.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes the entitlement usage associated with a license.</p>"

        }
      },
      "com.amazonaws.licensemanager#LicenseUsageException": {
        "type": "structure",
        "members": {
          "Message": {
            "target": "com.amazonaws.licensemanager#Message"
          }
        },
        "traits": {
          "aws.protocols#awsQueryError": {
            "code": "LicenseUsageFailure",
            "httpResponseCode": 412
          },
          "smithy.api#documentation": "<p>You do not have enough licenses available to support a new resource
launch.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 412
        }
      },
      "com.amazonaws.licensemanager#ListAssociationsForLicenseConfiguration": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#ListAssociationsForLicenseConfigurationRequest"
        },
        "output": {

    "target": "com.amazonaws.licensemanager#ListAssociationsForLicenseConfigurationResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#FilterLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the resource associations for the
 specified license configuration.</p>\n         <p>Resource associations need not consume licenses from a license
configuration. \n         For example, an AMI or a stopped instance might not consume a license (depending on \n
the license rules).</p>"
        }
    },
    "com.amazonaws.licensemanager#ListAssociationsForLicenseConfigurationRequest": {
        "type": "structure",
        "members": {
            "LicenseConfigurationArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of a license configuration.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanager#BoxInteger",
                "traits": {
```

```
                "smithy.api#documentation": "<p>Maximum number of results
to return in a single call.</p>"
              }
            },
            "NextToken": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Token for the next set of results.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanager#ListAssociationsForLicenseConfigurationResponse": {
          "type": "structure",
          "members": {
            "LicenseConfigurationAssociations": {
              "target": "com.amazonaws.licensemanager#LicenseConfigurationAssociations",
              "traits": {
                "smithy.api#documentation": "<p>Information about the associations for the license
configuration.</p>"
              }
            },
            "NextToken": {

 "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Token for the next set of results.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanager#ListDistributedGrants": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanager#ListDistributedGrantsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanager#ListDistributedGrantsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanager#AccessDeniedException"
```

```
            },
            {
              "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
              "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
             },
            {
              "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
              "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
              "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
              "target": "com.amazonaws.licensemanager#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists the grants distributed for the specified license.</p>"
          }
        },
        "com.amazonaws.licensemanager#ListDistributedGrantsRequest": {
          "type": "structure",
          "members": {
            "GrantArns": {
              "target": "com.amazonaws.licensemanager#ArnList",
              "traits": {

            "smithy.api#documentation": "<p>Amazon Resource Names (ARNs) of the grants.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanager#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>Filters to scope the results. The following filters are
supported:</p>\n        <ul>\n          <li>\n            <p>\n              <code>LicenseArn</code>\n            </p>\n
      </li>\n          <li>\n            <p>\n              <code>GrantStatus</code>\n            </p>\n          </li>\n
  <li>\n            <p>\n              <code>GranteePrincipalARN</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>ProductSKU</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>LicenseIssuerName</code>\n
        </p>\n          </li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "com.amazonaws.licensemanager#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
        },
        "MaxResults": {
            "target": "com.amazonaws.licensemanager#MaxSize100",
            "traits": {
                "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanager#ListDistributedGrantsResponse": {
    "type": "structure",
    "members": {
        "Grants": {
            "target": "com.amazonaws.licensemanager#GrantList",

"traits": {
                "smithy.api#documentation": "<p>Distributed grant details.</p>"
            }
        },
        "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanager#ListFailuresForLicenseConfigurationOperations": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanager#ListFailuresForLicenseConfigurationOperationsRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanager#ListFailuresForLicenseConfigurationOperationsResponse"
    },
    "errors": [
        {
```

```
"target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
               "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
               "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
               "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists the license configuration operations that failed.</p>"
         }
      },
      "com.amazonaws.licensemanager#ListFailuresForLicenseConfigurationOperationsRequest": {
         "type": "structure",
         "members": {
            "LicenseConfigurationArn": {
               "target": "com.amazonaws.licensemanager#String",
                "traits": {
                  "smithy.api#documentation": "<p>Amazon Resource Name of the license configuration.</p>",
                  "smithy.api#required": {}
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanager#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
               }
            },
            "NextToken": {
               "target": "com.amazonaws.licensemanager#String",
               "traits": {
                  "smithy.api#documentation": "<p>Token for the next set of results.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanager#ListFailuresForLicenseConfigurationOperationsResponse":
```

```
{
        "type": "structure",
        "members": {
          "LicenseOperationFailureList": {
            "target": "com.amazonaws.licensemanager#LicenseOperationFailureList",
            "traits": {
              "smithy.api#documentation": "<p>License configuration operations that failed.</p>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListLicenseConfigurations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#ListLicenseConfigurationsRequest"
        },

    "output": {
            "target": "com.amazonaws.licensemanager#ListLicenseConfigurationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#FilterLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          }
```

```
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the license configurations
 for your account.</p>"
        }
    },
    "com.amazonaws.licensemanager#ListLicenseConfigurationsRequest": {
        "type": "structure",
        "members": {
            "LicenseConfigurationArns": {
                "target": "com.amazonaws.licensemanager#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Names (ARN) of the license
configurations.</p>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanager#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
                }
            },
            "NextToken": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Token for the next
 set of results.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanager#Filters",
                "traits": {
                    "smithy.api#documentation": "<p>Filters to scope the results. The following filters and logical
operators\n        are supported:</p>\n        <ul>\n            <li>\n                <p>\n
<code>licenseCountingType</code> - The dimension for which licenses are counted.\n                Possible values are
<code>vCPU</code> | <code>Instance</code> | <code>Core</code> | <code>Socket</code>.\n                Logical
operators are <code>EQUALS</code> | <code>NOT_EQUALS</code>.</p>\n            </li>\n            <li>\n
<p>\n                <code>enforceLicenseCount</code> - A Boolean value that indicates whether hard license
enforcement is used. \n                Logical operators are <code>EQUALS</code> |
<code>NOT_EQUALS</code>.</p>\n
    </li>\n            <li>\n                <p>\n                <code>usagelimitExceeded</code> - A Boolean value that
indicates whether the available licenses have been exceeded. \n                Logical operators are
<code>EQUALS</code> | <code>NOT_EQUALS</code>.</p>\n            </li>\n        </ul>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
    }
  },
  "com.amazonaws.licensemanager#ListLicenseConfigurationsResponse": {
    "type": "structure",
    "members": {
      "LicenseConfigurations": {
        "target": "com.amazonaws.licensemanager#LicenseConfigurations",
        "traits": {
          "smithy.api#documentation": "<p>Information about the license configurations.</p>"
        }
      },
      "NextToken": {
        "target": "com.amazonaws.licensemanager#String",

     "traits": {
          "smithy.api#documentation": "<p>Token for the next set of results.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanager#ListLicenseConversionTasks": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanager#ListLicenseConversionTasksRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanager#ListLicenseConversionTasksResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanager#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanager#AuthorizationException"
      },
      {
        "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
       },
      {
        "target": "com.amazonaws.licensemanager#RateLimitExceededException"
      },
      {
        "target": "com.amazonaws.licensemanager#ServerInternalException"
      }
    ],
```

```
      "traits": {
        "smithy.api#documentation": "<p>Lists the license type conversion tasks for your account.</p>"
      }
    },
    "com.amazonaws.licensemanager#ListLicenseConversionTasksRequest": {
      "type": "structure",
      "members": {
        "NextToken": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Token for the next set of results.</p>"
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanager#BoxInteger",
          "traits": {

   "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
          }
        },
        "Filters": {
          "target": "com.amazonaws.licensemanager#Filters",
          "traits": {
            "smithy.api#documentation": "<p>\n        Filters to scope the results. Valid filters are
<code>ResourceArns</code> and <code>Status</code>.\n      </p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanager#ListLicenseConversionTasksResponse": {
      "type": "structure",
      "members": {
        "LicenseConversionTasks": {
          "target": "com.amazonaws.licensemanager#LicenseConversionTasks",
          "traits": {
            "smithy.api#documentation": "<p>Information about the license configuration tasks for your
 account.</p>"
          }
        },
        "NextToken": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Token for the next set of results.</p>"
          }
        }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#ListLicenseManagerReportGenerators": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#ListLicenseManagerReportGeneratorsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#ListLicenseManagerReportGeneratorsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target":
"com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the report generators for your account.</p>"
        }
    },
    "com.amazonaws.licensemanager#ListLicenseManagerReportGeneratorsRequest":
{
        "type": "structure",
        "members": {
```

```
            "Filters": {
              "target": "com.amazonaws.licensemanager#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>Filters to scope the results. The following filters are supported:
</p>\n      <ul>\n        <li>\n          <p>\n            <code>LicenseConfigurationArn</code>\n
</p>\n        </li>\n      </ul>"
              }
            },
            "NextToken": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Token for the next set of results.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanager#MaxSize100",
              "traits":
 {
                "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanager#ListLicenseManagerReportGeneratorsResponse": {
          "type": "structure",
          "members": {
            "ReportGenerators": {
              "target": "com.amazonaws.licensemanager#ReportGeneratorList",
              "traits": {
                "smithy.api#documentation": "<p>A report generator that creates periodic reports about your license
configurations.</p>"
              }
            },
            "NextToken": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Token for the next set of results.</p>"
              }

          }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
```

```
    "com.amazonaws.licensemanager#ListLicenseSpecificationsForResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanager#ListLicenseSpecificationsForResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanager#ListLicenseSpecificationsForResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanager#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanager#AuthorizationException"
        },
        {
          "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
        },
        {
          "target": "com.amazonaws.licensemanager#RateLimitExceededException"
         },
        {
          "target": "com.amazonaws.licensemanager#ServerInternalException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Describes the license configurations for the specified resource.</p>"
      }
    },
    "com.amazonaws.licensemanager#ListLicenseSpecificationsForResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of a resource that has an
associated license configuration.</p>",
            "smithy.api#required": {}
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanager#BoxInteger",
          "traits": {

       "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
          }
        },
        "NextToken": {
```

```
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#ListLicenseSpecificationsForResourceResponse": {
        "type": "structure",
        "members": {
          "LicenseSpecifications": {
            "target": "com.amazonaws.licensemanager#LicenseSpecifications",
            "traits": {
              "smithy.api#documentation": "<p>License configurations associated with a resource.</p>"
            }
          },
          "NextToken": {
             "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListLicenseVersions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#ListLicenseVersionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#ListLicenseVersionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
```

```
        },
        {
          "target": "com.amazonaws.licensemanager#RateLimitExceededException"
        },
        {
          "target": "com.amazonaws.licensemanager#ServerInternalException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists all versions of the specified license.</p>"
      }
    },
    "com.amazonaws.licensemanager#ListLicenseVersionsRequest": {
      "type": "structure",
      "members": {
        "LicenseArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits": {
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>",
            "smithy.api#required": {}
          }
        },
        "NextToken": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Token for the next set of results.</p>"
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanager#MaxSize100",
          "traits": {
            "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanager#ListLicenseVersionsResponse": {
      "type": "structure",
      "members": {
        "Licenses": {
          "target": "com.amazonaws.licensemanager#LicenseList",
          "traits": {
            "smithy.api#documentation": "<p>License details.</p>"
          }
        },
```

```
"NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListLicenses": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#ListLicensesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#ListLicensesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
           },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          },
          {
            "target": "com.amazonaws.licensemanager#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the licenses for your account.</p>"
        }
      },
      "com.amazonaws.licensemanager#ListLicensesRequest": {
        "type": "structure",
        "members": {
          "LicenseArns": {
```

```
            "target": "com.amazonaws.licensemanager#ArnList",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Names (ARNs) of the licenses.</p>"
            }
          },

    "Filters": {
            "target": "com.amazonaws.licensemanager#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>Filters to scope the results. The following filters are
supported:</p>\n        <ul>\n          <li>\n            <p>\n              <code>Beneficiary</code>\n            </p>\n
      </li>\n          <li>\n            <p>\n              <code>ProductSKU</code>\n            </p>\n          </li>\n
  <li>\n            <p>\n              <code>Fingerprint</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>Status</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token
 for the next set of results.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanager#MaxSize100",
            "traits": {
              "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#ListLicensesResponse": {
        "type": "structure",
        "members": {
          "Licenses": {
            "target": "com.amazonaws.licensemanager#LicenseList",
            "traits": {
              "smithy.api#documentation": "<p>License details.</p>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
```

```
"smithy.api#documentation": "<p>Token for the next set of results.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#ListReceivedGrants": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#ListReceivedGrantsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#ListReceivedGrantsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
             },
            {
                "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists grants that are received. Received grants are grants created while
specifying the\n          recipient as this Amazon Web Services account, your organization, or an organizational unit\n
    (OU) to which this member account belongs.</p>"
        }
    },
    "com.amazonaws.licensemanager#ListReceivedGrantsForOrganization": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanager#ListReceivedGrantsForOrganizationRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanager#ListReceivedGrantsForOrganizationResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
              "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
              "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
              "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
              "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
              "target":
 "com.amazonaws.licensemanager#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists the grants received for all accounts in the organization.</p>"
          }
        },
        "com.amazonaws.licensemanager#ListReceivedGrantsForOrganizationRequest": {
          "type": "structure",
          "members": {
            "LicenseArn": {
              "target": "com.amazonaws.licensemanager#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the received license.</p>",
                "smithy.api#required": {}
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanager#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>Filters to scope the results. The following filters are
supported:</p>\n
```

```
<ul>\n <li>\n <p>\n <code>ParentArn</code>\n </p>\n </li>\n
<li>\n <p>\n <code>GranteePrincipalArn</code>\n </p>\n </li>\n </ul>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanager#MaxSize100",
            "traits": {
              "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#ListReceivedGrantsForOrganizationResponse":
{
        "type": "structure",
        "members": {
          "Grants": {
            "target": "com.amazonaws.licensemanager#GrantList",
            "traits": {
              "smithy.api#documentation": "<p>Lists the grants the organization has received.</p>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListReceivedGrantsRequest": {
        "type": "structure",
        "members": {
          "GrantArns": {
            "target": "com.amazonaws.licensemanager#ArnList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Names (ARNs) of the grants.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanager#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>Filters to scope the results. The following filters are
supported:</p>\n        <ul>\n          <li>\n            <p>\n              <code>ProductSKU</code>\n            </p>\n
        </li>\n          <li>\n            <p>\n              <code>LicenseIssuerName</code>\n            </p>\n
</li>\n          <li>\n            <p>\n              <code>LicenseArn</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>GrantStatus</code>\n            </p>\n          </li>\n          <li>\n
<p>\n
        <code>GranterAccountId</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanager#MaxSize100",
            "traits": {
              "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#ListReceivedGrantsResponse": {
        "type": "structure",
        "members": {
          "Grants": {
            "target": "com.amazonaws.licensemanager#GrantList",
            "traits": {
              "smithy.api#documentation": "<p>Received grant details.</p>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#ListReceivedLicenses": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#ListReceivedLicensesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#ListReceivedLicensesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
             },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists received licenses.</p>"
        }
    },
    "com.amazonaws.licensemanager#ListReceivedLicensesForOrganization":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#ListReceivedLicensesForOrganizationRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#ListReceivedLicensesForOrganizationResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
          },
          {

      "target": "com.amazonaws.licensemanager#ServerInternalException"
          },
          {
            "target": "com.amazonaws.licensemanager#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the licenses received for all accounts in the organization.</p>"
        }
      },
      "com.amazonaws.licensemanager#ListReceivedLicensesForOrganizationRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanager#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>Filters to scope the results. The following filters are
supported:</p>\n        <ul>\n          <li>\n            <p>\n              <code>Beneficiary</code>\n            </p>\n
        </li>\n          <li>\n            <p>\n              <code>ProductSKU</code>\n
          </p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          },
          "MaxResults": {
```

```
            "target": "com.amazonaws.licensemanager#MaxSize100",
            "traits": {
              "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#ListReceivedLicensesForOrganizationResponse": {
        "type": "structure",
        "members": {
          "Licenses": {
            "target": "com.amazonaws.licensemanager#GrantedLicenseList",
             "traits": {
              "smithy.api#documentation": "<p>Lists the licenses the organization has received.</p>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListReceivedLicensesRequest": {
        "type": "structure",
        "members": {
          "LicenseArns": {
            "target": "com.amazonaws.licensemanager#ArnList",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Names (ARNs) of the licenses.</p>"
            }
          },

           "Filters": {
            "target": "com.amazonaws.licensemanager#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>Filters to scope the results. The following filters are
supported:</p>\n        <ul>\n          <li>\n            <p>\n              <code>ProductSKU</code>\n            </p>\n
        </li>\n          <li>\n            <p>\n              <code>Status</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>Fingerprint</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>IssuerName</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
```

```
<code>Beneficiary</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
             "traits": {
               "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanager#MaxSize100",
            "traits": {
               "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#ListReceivedLicensesResponse": {
        "type": "structure",
        "members": {
          "Licenses": {
            "target": "com.amazonaws.licensemanager#GrantedLicenseList",
            "traits": {
               "smithy.api#documentation": "<p>Received license details.</p>"
            }
          },

         "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
               "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListResourceInventory": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#ListResourceInventoryRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#ListResourceInventoryResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
             "target": "com.amazonaws.licensemanager#FailedDependencyException"
          },
          {
            "target": "com.amazonaws.licensemanager#FilterLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists resources managed using Systems Manager inventory.</p>"
        }
      },
      "com.amazonaws.licensemanager#ListResourceInventoryRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanager#BoxInteger",
             "traits": {
               "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
             }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanager#InventoryFilterList",
            "traits": {
              "smithy.api#documentation": "<p>Filters to scope the results. The following filters and logical
operators\n       are supported:</p>\n       <ul>\n       <li>\n       <p>\n       <code>account_id</code>
```

- The ID of the Amazon Web Services account that owns the resource.\n Logical operators are <code>EQUALS</code> | <code>NOT_EQUALS</code>. \n \n \n \n <code>application_name</code> - The name of the application. \n Logical operators are <code>EQUALS</code> | <code>BEGINS_WITH</code>. \n \n \n \n <code>license_included</code> - The type of license included. \n Logical operators are <code>EQUALS</code> | <code>NOT_EQUALS</code>.\n Possible values are <code>sql-server-enterprise</code> | \n <code>sql-server-standard</code> | \n <code>sql-server-web</code> | \n <code>windows-server-datacenter</code>. \n \n \n \n <code>platform</code> - The platform of the resource.\n Logical operators are <code>EQUALS</code> | <code>BEGINS_WITH</code>. \n \n \n \n <code>resource_id</code> - The ID of the resource. \n Logical operators are <code>EQUALS</code> | <code>NOT_EQUALS</code>. \n \n \n \n <code>tag:<key></code> - The key/value combination of a tag assigned \n to the resource. Logical operators are <code>EQUALS</code> (single account) or\n <code>EQUALS</code> | <code>NOT_EQUALS</code> (cross account). \n \n "
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#ListResourceInventoryResponse": {
        "type": "structure",
        "members": {
          "ResourceInventoryList": {
            "target": "com.amazonaws.licensemanager#ResourceInventoryList",
            "traits": {
              "smithy.api#documentation": " Information
 about the resources. "
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": " Token for the next set of results. "
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#ListTagsForResourceRequest"
        },

```
        "output": {
            "target": "com.amazonaws.licensemanager#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
             },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the tags for the specified license configuration.</p>"
        }
    },
    "com.amazonaws.licensemanager#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license
configuration.</p>",

    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanager#TagList",
                "traits": {
                    "smithy.api#documentation": "<p>Information about the tags.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListTokens": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#ListTokensRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#ListTokensResponse"
        },
        "errors":
[
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          },
          {
            "target": "com.amazonaws.licensemanager#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists your tokens.</p>"
        }
      },
      "com.amazonaws.licensemanager#ListTokensRequest": {
        "type": "structure",
        "members": {
          "TokenIds": {
            "target": "com.amazonaws.licensemanager#StringList",
            "traits": {

              "smithy.api#documentation": "<p>Token IDs.</p>"
            }
          },
          "Filters": {
```

```
            "target": "com.amazonaws.licensemanager#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>Filters to scope the results. The following filter is supported:</p>\n
    <ul>\n        <li>\n        <p>\n        <code>LicenseArns</code>\n        </p>\n        </li>\n
</ul>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanager#MaxSize100",
            "traits": {
              "smithy.api#documentation":
 "<p>Maximum number of results to return in a single call.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#ListTokensResponse": {
        "type": "structure",
        "members": {
          "Tokens": {
            "target": "com.amazonaws.licensemanager#TokenList",
            "traits": {
              "smithy.api#documentation": "<p>Received token details.</p>"
            }
          },
          "NextToken": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token for the next set of results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#ListUsageForLicenseConfiguration":
{
        "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanager#ListUsageForLicenseConfigurationRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#ListUsageForLicenseConfigurationResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#FilterLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists all license usage records for a license configuration, displaying license\n consumption details by resource at a selected point in time. Use this action to audit the\n current license consumption for any license inventory and configuration.</p>"
        }
    },
    "com.amazonaws.licensemanager#ListUsageForLicenseConfigurationRequest": {
        "type": "structure",
        "members": {
            "LicenseConfigurationArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license configuration.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanager#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>Maximum number of results to return in a single call.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "com.amazonaws.licensemanager#String",
               "traits": {
                  "smithy.api#documentation": "<p>Token for the next set of results.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanager#Filters",
               "traits": {
                  "smithy.api#documentation": "<p>Filters to scope the results. The following filters and logical
operators\n        are supported:</p>\n        <ul>\n            <li>\n                <p>\n
<code>resourceArn</code> - The ARN of the license configuration resource.\n
            Logical operators are <code>EQUALS</code> | <code>NOT_EQUALS</code>.</p>\n            </li>\n
 <li>\n                <p>\n                    <code>resourceType</code> - The resource type
(<code>EC2_INSTANCE</code> | <code>EC2_HOST</code> | <code>EC2_AMI</code> |
<code>SYSTEMS_MANAGER_MANAGED_INSTANCE</code>). \n                Logical operators are
<code>EQUALS</code> | <code>NOT_EQUALS</code>.</p>\n            </li>\n            <li>\n                <p>\n
    <code>resourceAccount</code> - The ID of the account that owns the resource. \n                Logical operators
are <code>EQUALS</code> | <code>NOT_EQUALS</code>.</p>\n            </li>\n        </ul>"
                  }
               }
            },
            "traits": {
               "smithy.api#input": {}
            }
         },
         "com.amazonaws.licensemanager#ListUsageForLicenseConfigurationResponse": {
            "type": "structure",
            "members": {

 "LicenseConfigurationUsageList": {
                  "target": "com.amazonaws.licensemanager#LicenseConfigurationUsageList",
                  "traits": {
                     "smithy.api#documentation": "<p>Information about the license configurations.</p>"
                  }
               },
               "NextToken": {
                  "target": "com.amazonaws.licensemanager#String",
                  "traits": {
                     "smithy.api#documentation": "<p>Token for the next set of results.</p>"
                  }
               }
            },
            "traits": {
               "smithy.api#output": {}
            }
         },
```

```
    "com.amazonaws.licensemanager#Location": {
      "type": "string"
    },
    "com.amazonaws.licensemanager#Long": {
      "type": "long"
    },
    "com.amazonaws.licensemanager#ManagedResourceSummary": {
      "type": "structure",
      "members": {
        "ResourceType":
{
          "target": "com.amazonaws.licensemanager#ResourceType",
          "traits": {
            "smithy.api#documentation": "<p>Type of resource associated with a license.</p>"
          }
        },
        "AssociationCount": {
          "target": "com.amazonaws.licensemanager#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>Number of resources associated with licenses.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Summary information about a managed resource.</p>"
      }
    },
    "com.amazonaws.licensemanager#ManagedResourceSummaryList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#ManagedResourceSummary"
      }
    },
    "com.amazonaws.licensemanager#MaxSize100": {

    "type": "integer",
      "traits": {
        "smithy.api#range": {
          "min": 1,
          "max": 100
        }
      }
    },
    "com.amazonaws.licensemanager#MaxSize3StringList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#String"
      },
```

```
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 3
      }
    }
  },
  "com.amazonaws.licensemanager#Message": {
    "type": "string"
  },
  "com.amazonaws.licensemanager#Metadata": {
    "type": "structure",
    "members": {
      "Name": {
        "target": "com.amazonaws.licensemanager#String",
        "traits": {
          "smithy.api#documentation": "<p>The key name.</p>"
        }
      },

  "Value": {
        "target": "com.amazonaws.licensemanager#String",
        "traits": {
          "smithy.api#documentation": "<p>The value.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#documentation": "<p>Describes key/value pairs.</p>"
    }
  },
  "com.amazonaws.licensemanager#MetadataList": {
    "type": "list",
    "member": {
      "target": "com.amazonaws.licensemanager#Metadata"
    }
  },
  "com.amazonaws.licensemanager#NoEntitlementsAllowedException": {
    "type": "structure",
    "members": {
      "Message": {
        "target": "com.amazonaws.licensemanager#Message"
      }
    },
    "traits": {
      "smithy.api#documentation": "<p>There are no entitlements found for this license, or the entitlement
maximum count is reached.</p>",
```

```
            "smithy.api#error": "client",
            "smithy.api#httpError": 400
        }
    },
    "com.amazonaws.licensemanager#Options": {
        "type": "structure",
        "members": {
            "ActivationOverrideBehavior": {
                "target": "com.amazonaws.licensemanager#ActivationOverrideBehavior",
                "traits": {
                    "smithy.api#documentation": "<p>An activation option for your grant that determines the behavior of activating a grant.\n          Activation options can only be used with granted licenses sourced from the Amazon Web Services Marketplace. Additionally, the operation must specify the value of <code>ACTIVE</code> for the\n <code>Status</code> parameter.</p>\n          <ul>\n             <li>\n                <p>As a license administrator, you can optionally specify an\n                   <code>ActivationOverrideBehavior</code> when activating a grant.</p>\n             </li>\n             <li>\n                <p>As a grantor, you can optionally specify an\n <code>ActivationOverrideBehavior</code> when you activate a grant for a grantee\n                   account in your organization.</p>\n             </li>\n             <li>\n                <p>As a grantee, if the grantor creating the distributed grant doesnt specify an\n                   <code>ActivationOverrideBehavior</code>, you can optionally specify one when you\n                   are activating the grant.</p>\n             </li>\n          </ul>\n          <dl>\n             <dt>DISTRIBUTED_GRANTS_ONLY</dt>\n             <dd>\n                <p>Use this value to activate a grant without replacing any member accounts\n                   active grants for the same product.</p>\n             </dd>\n             <dt>ALL_GRANTS_PERMITTED_BY_ISSUER</dt>\n             <dd>\n                <p>Use this value to activate a grant and disable other active grants in any\n                   member accounts\n                   for the same product. This action will also replace their\n                   previously activated grants with this activated grant.</p>\n             </dd>\n          </dl>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The options you can specify when you create a new version of a grant, such as activation\n          override behavior. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/granted-licenses.html\">Granted licenses in License Manager</a> in the <i>License Manager User Guide</i>.</p>"
        }
    },
    "com.amazonaws.licensemanager#OrganizationConfiguration": {
        "type": "structure",
        "members": {
            "EnableIntegration": {
                "target": "com.amazonaws.licensemanager#Boolean",
                "traits": {
                    "smithy.api#default": false,
                    "smithy.api#documentation":
 "<p>Enables Organizations integration.</p>",
                    "smithy.api#required": {}
                }
            }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>Configuration information for Organizations.</p>"
        }
      },
      "com.amazonaws.licensemanager#PrincipalArnList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#Arn"
        },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 1
          }
        }
      },
      "com.amazonaws.licensemanager#ProductInformation": {
        "type": "structure",
        "members": {
          "ResourceType": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Resource type. The
 possible values are <code>SSM_MANAGED</code> | <code>RDS</code>.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductInformationFilterList": {
            "target": "com.amazonaws.licensemanager#ProductInformationFilterList",
            "traits": {
              "smithy.api#documentation": "<p>A Product information filter consists of a
 <code>ProductInformationFilterComparator</code> which is a logical operator, a
 <code>ProductInformationFilterName</code> which specifies the type of filter being declared, and a
 <code>ProductInformationFilterValue</code> that specifies the value to filter on. </p>\n          <p>Accepted values
 for <code>ProductInformationFilterName</code> are listed here along with descriptions and valid options for
 <code>ProductInformationFilterComparator</code>. </p>\n          <p>The following filters and are supported when
 the resource type \n          is <code>SSM_MANAGED</code>:</p>\n
          <ul>\n            <li>\n              <p>\n                <code>Application Name</code> - The name of the
 application.\n                Logical operator is <code>EQUALS</code>.</p>\n            </li>\n            <li>\n
 <p>\n                <code>Application Publisher</code> - The publisher of the application.\n                Logical
 operator is <code>EQUALS</code>.</p>\n            </li>\n            <li>\n              <p>\n
 <code>Application Version</code> - The version of the application.\n                Logical operator is
 <code>EQUALS</code>.</p>\n            </li>\n            <li>\n              <p>\n                <code>Platform
 Name</code> - The name of the platform.\n                Logical operator is <code>EQUALS</code>.</p>\n
 </li>\n            <li>\n              <p>\n                <code>Platform Type</code> - The platform type.\n
 Logical operator is <code>EQUALS</code>.</p>\n
```

```
</li>\n <li>\n <p>\n <code>Tag:key</code> - The key of a tag attached to an Amazon Web Services resource you wish to exclude from automated discovery. Logical operator is <code>NOT_EQUALS</code>. The key for your tag must be appended to <code>Tag:</code> following the example: <code>Tag:name-of-your-key</code>. <code>ProductInformationFilterValue</code> is optional if you are not using values for the key.\n </p>\n </li>\n <li>\n <p>\n <code>AccountId</code> - The 12-digit ID of an Amazon Web Services account you wish to exclude from automated discovery.\n Logical operator is <code>NOT_EQUALS</code>.</p>\n </li>\n <li>\n <p>\n <code>License Included</code> - The type of license included.\n Logical operators are <code>EQUALS</code> and <code>NOT_EQUALS</code>.\n Possible values are: <code>sql-server-enterprise</code> | \n <code>sql-server-standard</code> | \n <code>sql-server-web</code> | \n <code>windows-server-datacenter</code>.</p>\n </li>\n </ul>\n <p>The following filters and logical operators are supported when the resource type\n is <code>RDS</code>:</p>\n <ul>\n <li>\n <p>\n <code>Engine Edition</code> - The edition of the database engine.\n Logical operator is <code>EQUALS</code>.\n Possible values are: <code>oracle-ee</code> | <code>oracle-se</code> | <code>oracle-se1</code> | <code>oracle-se2</code>.</p>\n </li>\n <li>\n <p>\n <code>License Pack</code> - The license pack.\n Logical operator is <code>EQUALS</code>.\n Possible values are: <code>data guard</code> | \n <code>diagnostic pack sqlt</code> | \n
<code>tuning pack sqlt</code> | \n <code>ols</code> | \n <code>olap</code>.</p>\n
</li>\n </ul>",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#documentation": "<p>Describes product information for a license configuration.</p>"
}
},
"com.amazonaws.licensemanager#ProductInformationFilter": {
"type": "structure",
"members": {
"ProductInformationFilterName": {
"target": "com.amazonaws.licensemanager#String",
"traits": {
"smithy.api#documentation": "<p>Filter name.</p>",
"smithy.api#required": {}
}
},
"ProductInformationFilterValue": {
"target": "com.amazonaws.licensemanager#StringList",

"traits": {
"smithy.api#documentation": "<p>Filter value.</p>"
}
},
"ProductInformationFilterComparator": {
"target": "com.amazonaws.licensemanager#String",
"traits": {
```

```
            "smithy.api#documentation": "<p>Logical operator.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes product information filters.</p>"
      }
    },
    "com.amazonaws.licensemanager#ProductInformationFilterList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#ProductInformationFilter"
      }
    },
    "com.amazonaws.licensemanager#ProductInformationList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#ProductInformation"
       }
    },
    "com.amazonaws.licensemanager#ProvisionalConfiguration": {
      "type": "structure",
      "members": {
        "MaxTimeToLiveInMinutes": {
          "target": "com.amazonaws.licensemanager#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>Maximum time for the provisional configuration, in minutes.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about a provisional configuration.</p>"
      }
    },
    "com.amazonaws.licensemanager#RateLimitExceededException": {
      "type": "structure",
      "members": {
        "Message": {
          "target": "com.amazonaws.licensemanager#Message"
        }
      },
      "traits": {
        "aws.protocols#awsQueryError": {
          "code": "RateLimitExceeded",
          "httpResponseCode": 429
        },
```

```
            "smithy.api#documentation": "<p>Too many requests have been submitted. Try again after a brief
wait.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 429
          }
        },
        "com.amazonaws.licensemanager#ReceivedMetadata": {
          "type": "structure",
          "members": {
            "ReceivedStatus": {
              "target": "com.amazonaws.licensemanager#ReceivedStatus",
              "traits": {
                "smithy.api#documentation": "<p>Received status.</p>"
              }
            },
            "ReceivedStatusReason": {
              "target": "com.amazonaws.licensemanager#StatusReasonMessage",
              "traits": {
                "smithy.api#documentation": "<p>Received
 status reason.</p>"
              }
            },
            "AllowedOperations": {
              "target": "com.amazonaws.licensemanager#AllowedOperationList",
              "traits": {
                "smithy.api#documentation": "<p>Allowed operations.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Metadata associated with received licenses and grants.</p>"
          }
        },
        "com.amazonaws.licensemanager#ReceivedStatus": {
          "type": "enum",
          "members": {
            "PENDING_WORKFLOW": {
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue": "PENDING_WORKFLOW"
              }
            },
            "PENDING_ACCEPT": {
              "target": "smithy.api#Unit",
              "traits": {
                "smithy.api#enumValue":
 "PENDING_ACCEPT"
              }
```

```
        },
        "REJECTED": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "REJECTED"
          }
        },
        "ACTIVE": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "ACTIVE"
          }
        },
        "FAILED_WORKFLOW": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "FAILED_WORKFLOW"
          }
        },
        "DELETED": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "DELETED"
          }
        },
        "DISABLED": {
          "target": "smithy.api#Unit",
           "traits": {
            "smithy.api#enumValue": "DISABLED"
          }
        },
        "WORKFLOW_COMPLETED": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "WORKFLOW_COMPLETED"
          }
        }
      }
    },
    "com.amazonaws.licensemanager#RedirectException": {
      "type": "structure",
      "members": {
        "Location": {
          "target": "com.amazonaws.licensemanager#Location",
          "traits": {
            "smithy.api#httpHeader": "Location"
          }
        },
```

```
            "Message": {
                "target": "com.amazonaws.licensemanager#Message"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>This is not the correct Region for the resource. Try again.</p>",
             "smithy.api#error": "client",
            "smithy.api#httpError": 308
        }
    },
    "com.amazonaws.licensemanager#RejectGrant": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#RejectGrantRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#RejectGrantResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target":
"com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Rejects the specified grant.</p>"
        }
    },
    "com.amazonaws.licensemanager#RejectGrantRequest": {
        "type": "structure",
```

```
      "members": {
        "GrantArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits": {
            "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the grant.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}

  }
    },
    "com.amazonaws.licensemanager#RejectGrantResponse": {
      "type": "structure",
      "members": {
        "GrantArn": {
          "target": "com.amazonaws.licensemanager#Arn",
          "traits": {
            "smithy.api#documentation": "<p>Grant ARN.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanager#GrantStatus",
          "traits": {
            "smithy.api#documentation": "<p>Grant status.</p>"
          }
        },
        "Version": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Grant version.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanager#RenewType":
{
      "type": "enum",
      "members": {
        "NONE": {
          "target": "smithy.api#Unit",
          "traits": {
            "smithy.api#enumValue": "None"
```

```
            }
          },
          "WEEKLY": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "Weekly"
            }
          },
          "MONTHLY": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "Monthly"
            }
          }
        }
      },
      "com.amazonaws.licensemanager#ReportContext": {
        "type": "structure",
        "members": {
          "licenseConfigurationArns": {
            "target": "com.amazonaws.licensemanager#ArnList",
            "traits": {

        "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license configuration that this
generator reports on.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details of the license configuration that this generator reports on.</p>"
        }
      },
      "com.amazonaws.licensemanager#ReportFrequency": {
        "type": "structure",
        "members": {
          "value": {
            "target": "com.amazonaws.licensemanager#Integer",
            "traits": {
              "smithy.api#documentation": "<p>Number of times within the frequency period that a report is
generated.  \n        The only supported value is <code>1</code>.</p>"
            }
          },
          "period": {
            "target": "com.amazonaws.licensemanager#ReportFrequencyType",

           "traits": {
              "smithy.api#documentation": "<p>Time period between each report. The period can be daily, weekly,
```

```
or monthly.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about how frequently reports are generated.</p>"
        }
    },
    "com.amazonaws.licensemanager#ReportFrequencyType": {
        "type": "enum",
        "members": {
            "DAY": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "DAY"
                }
            },
            "WEEK": {
                "target": "smithy.api#Unit",
                "traits": {
                    "smithy.api#enumValue": "WEEK"
                }
            },
            "MONTH": {
                "target": "smithy.api#Unit",
                "traits":
{
                    "smithy.api#enumValue": "MONTH"
                }
            }
        }
    },
    "com.amazonaws.licensemanager#ReportGenerator": {
        "type": "structure",
        "members": {
            "ReportGeneratorName": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Name of the report generator.</p>"
                }
            },
            "ReportType": {
                "target": "com.amazonaws.licensemanager#ReportTypeList",
                "traits": {
                    "smithy.api#documentation": "<p>Type of reports that are generated.</p>"
                }
            },
            "ReportContext": {
```

```
            "target": "com.amazonaws.licensemanager#ReportContext",
            "traits": {
                "smithy.api#documentation": "<p>License
 configuration type for this generator.</p>"
            }
        },
        "ReportFrequency": {
            "target": "com.amazonaws.licensemanager#ReportFrequency",
            "traits": {
                "smithy.api#documentation": "<p>Details about how frequently reports are generated.</p>"
            }
        },
        "LicenseManagerReportGeneratorArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the report generator.</p>"
            }
        },
        "LastRunStatus": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Status of the last report generation attempt.</p>"
            }
        },
        "LastRunFailureReason":
 {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Failure message for the last report generation attempt.</p>"
            }
        },
        "LastReportGenerationTime": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>Time the last report was generated at.</p>"
            }
        },
        "ReportCreatorAccount": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Web Services account ID used to create the report
 generator.</p>"
            }
        },
        "Description": {
            "target": "com.amazonaws.licensemanager#String",
```

```
        "traits": {
                "smithy.api#documentation": "<p>Description of the report generator.</p>"
            }
          },
          "S3Location": {
            "target": "com.amazonaws.licensemanager#S3Location",
            "traits": {
              "smithy.api#documentation": "<p>Details of the S3 bucket that report generator reports are published
to.</p>"
            }
          },
          "CreateTime": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Time the report was created.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanager#TagList",
            "traits": {
              "smithy.api#documentation": "<p>Tags associated with the report generator.</p>"
            }

      }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describe the details of a report generator.</p>"
        }
      },
      "com.amazonaws.licensemanager#ReportGeneratorList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#ReportGenerator"
        }
      },
      "com.amazonaws.licensemanager#ReportGeneratorName": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "com.amazonaws.licensemanager#ReportType": {
        "type": "enum",
        "members": {
          "LICENSE_CONFIGURATION_SUMMARY_REPORT": {
```

```
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "LicenseConfigurationSummaryReport"
            }

      },
          "LICENSE_CONFIGURATION_USAGE_REPORT": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "LicenseConfigurationUsageReport"
            }
          }
        }
      },
      "com.amazonaws.licensemanager#ReportTypeList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#ReportType"
        }
      },
      "com.amazonaws.licensemanager#ResourceInventory": {
        "type": "structure",
        "members": {
          "ResourceId": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>ID of the resource.</p>"
            }
          },
          "ResourceType": {
            "target": "com.amazonaws.licensemanager#ResourceType",
            "traits":
{
              "smithy.api#documentation": "<p>Type of resource.</p>"
            }
          },
          "ResourceArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the resource.</p>"
            }
          },
          "Platform": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Platform of the resource.</p>"
            }
          },
```

```
        "PlatformVersion": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Platform version of the resource in the inventory.</p>"
          }
        },
        "ResourceOwningAccountId":
{
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>ID of the account that owns the resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about a resource.</p>"
      }
    },
    "com.amazonaws.licensemanager#ResourceInventoryList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanager#ResourceInventory"
      }
    },
    "com.amazonaws.licensemanager#ResourceLimitExceededException": {
      "type": "structure",
      "members": {
        "Message": {
          "target": "com.amazonaws.licensemanager#Message"
        }
      },
      "traits": {
        "aws.protocols#awsQueryError": {
          "code": "ResourceLimitExceeded",

           "httpResponseCode": 400
        },
        "smithy.api#documentation": "<p>Your resource limits have been exceeded.</p>",
        "smithy.api#error": "client",
        "smithy.api#httpError": 400
      }
    },
    "com.amazonaws.licensemanager#ResourceNotFoundException": {
      "type": "structure",
      "members": {
        "Message": {
          "target": "com.amazonaws.licensemanager#Message"
        }
```

```
    },
    "traits": {
      "aws.protocols#awsQueryError": {
        "code": "InvalidResource.NotFound",
        "httpResponseCode": 400
      },
      "smithy.api#documentation": "<p>The resource cannot be found.</p>",
      "smithy.api#error": "client",
      "smithy.api#httpError": 400
    }
  },
  "com.amazonaws.licensemanager#ResourceType": {
    "type": "enum",
    "members": {
      "EC2_INSTANCE": {
        "target": "smithy.api#Unit",
        "traits": {
          "smithy.api#enumValue": "EC2_INSTANCE"
        }
      },
      "EC2_HOST": {
        "target": "smithy.api#Unit",
        "traits": {
          "smithy.api#enumValue": "EC2_HOST"
        }
      },
      "EC2_AMI": {
        "target": "smithy.api#Unit",
        "traits": {
          "smithy.api#enumValue": "EC2_AMI"
        }
      },
      "RDS": {
        "target": "smithy.api#Unit",
        "traits": {
          "smithy.api#enumValue": "RDS"
        }
      },
      "SYSTEMS_MANAGER_MANAGED_INSTANCE": {
        "target": "smithy.api#Unit",
        "traits": {
          "smithy.api#enumValue": "SYSTEMS_MANAGER_MANAGED_INSTANCE"
        }
      }
    }
  },
  "com.amazonaws.licensemanager#S3Location": {
    "type": "structure",
```

```
      "members": {
        "bucket": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Name of the S3 bucket reports are published to.</p>"
          }
        },
        "keyPrefix": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Prefix of the S3 bucket reports are published to.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details of the S3 bucket that report generator reports are published
to.</p>"
      }
    },
    "com.amazonaws.licensemanager#ServerInternalException": {
      "type": "structure",
      "members": {
        "Message": {
          "target": "com.amazonaws.licensemanager#Message"
        }
      },
      "traits": {
        "aws.protocols#awsQueryError": {
          "code": "InternalError",
          "httpResponseCode": 500
        },
        "smithy.api#documentation": "<p>The server experienced an internal error. Try again.</p>",
        "smithy.api#error": "server",
        "smithy.api#httpError": 500
      }
    },
    "com.amazonaws.licensemanager#SignedToken": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 4096
        }
      }
    },
    "com.amazonaws.licensemanager#StatusReasonMessage": {
      "type": "string",
      "traits":
```

```
{
            "smithy.api#length": {
               "min": 0,
               "max": 400
            },
            "smithy.api#pattern": "^[\\s\\S]+$"
         }
      },
      "com.amazonaws.licensemanager#String": {
         "type": "string"
      },
      "com.amazonaws.licensemanager#StringList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanager#String"
         }
      },
      "com.amazonaws.licensemanager#Tag": {
         "type": "structure",
         "members": {
            "Key": {
               "target": "com.amazonaws.licensemanager#String",
               "traits": {
                  "smithy.api#documentation": "<p>Tag key.</p>"
               }
            },
            "Value": {
               "target": "com.amazonaws.licensemanager#String",
               "traits": {
                  "smithy.api#documentation":
"<p>Tag value.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details about a tag for a license configuration.</p>"
         }
      },
      "com.amazonaws.licensemanager#TagKeyList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanager#String"
         }
      },
      "com.amazonaws.licensemanager#TagList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanager#Tag"
```

```
        }
      },
      "com.amazonaws.licensemanager#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#TagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanager#TagResourceResponse"
        },
        "errors": [
          {
            "target":
 "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
            "target": "com.amazonaws.licensemanager#RateLimitExceededException"
          },
          {
            "target": "com.amazonaws.licensemanager#ServerInternalException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Adds the specified tags to the specified license configuration.</p>"
        }
      },
      "com.amazonaws.licensemanager#TagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits":
 {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license
configuration.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanager#TagList",
            "traits": {
              "smithy.api#documentation": "<p>One or more tags.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanager#TagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanager#TokenData": {
          "type": "structure",
          "members": {
            "TokenId": {
              "target": "com.amazonaws.licensemanager#String",
               "traits": {
                "smithy.api#documentation": "<p>Token ID.</p>"
              }
            },
            "TokenType": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Type of token generated. The supported value is
<code>REFRESH_TOKEN</code>.</p>"
              }
            },
            "LicenseArn": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license.</p>"
              }
            },
            "ExpirationTime": {
              "target": "com.amazonaws.licensemanager#ISO8601DateTime",
              "traits": {
                "smithy.api#documentation": "<p>Token expiration time, in ISO8601-UTC
 format.</p>"
              }
            },
            "TokenProperties": {
              "target": "com.amazonaws.licensemanager#MaxSize3StringList",
              "traits": {
                "smithy.api#documentation": "<p>Data specified by the caller.</p>"
```

```
            }
          },
          "RoleArns": {
            "target": "com.amazonaws.licensemanager#ArnList",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Names (ARN) of the roles included in the
token.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Token status. The possible values are
<code>AVAILABLE</code> and <code>DELETED</code>.</p>"
            }
          }
        },
        "traits": {

          "smithy.api#documentation": "<p>Describes a token.</p>"
        }
      },
      "com.amazonaws.licensemanager#TokenList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanager#TokenData"
        }
      },
      "com.amazonaws.licensemanager#TokenString": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 4096
          },
          "smithy.api#pattern": "^\\S+$"
        }
      },
      "com.amazonaws.licensemanager#TokenType": {
        "type": "enum",
        "members": {
          "REFRESH_TOKEN": {
            "target": "smithy.api#Unit",
            "traits": {
              "smithy.api#enumValue": "REFRESH_TOKEN"
            }
          }
        }
```

```
    },
    "com.amazonaws.licensemanager#UnsupportedDigitalSignatureMethodException":
{
        "type": "structure",
        "members": {
            "Message": {
                "target": "com.amazonaws.licensemanager#Message"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The digital signature method is unsupported. Try your request
again.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 400
        }
    },
    "com.amazonaws.licensemanager#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
             },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes the specified tags from the specified license
configuration.</p>"
        }
    },
    "com.amazonaws.licensemanager#UntagResourceRequest": {
        "type": "structure",
```

```
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanager#String",
            "traits": {
              "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license
configuration.</p>",
               "smithy.api#required": {}
            }
          },
          "TagKeys": {
            "target": "com.amazonaws.licensemanager#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>Keys identifying the tags to remove.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanager#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanager#UpdateLicenseConfiguration": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanager#UpdateLicenseConfigurationRequest"
        },
        "output": {

 "target": "com.amazonaws.licensemanager#UpdateLicenseConfigurationResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanager#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanager#AuthorizationException"
          },
          {
            "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Modifies the attributes of an existing license configuration.</p>"
        }
    },
    "com.amazonaws.licensemanager#UpdateLicenseConfigurationRequest": {
        "type": "structure",
        "members": {
            "LicenseConfigurationArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the license
configuration.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseConfigurationStatus": {
                "target": "com.amazonaws.licensemanager#LicenseConfigurationStatus",
                "traits": {
                    "smithy.api#documentation": "<p>New status of the license configuration.</p>"
                }
            },
            "LicenseRules": {
                "target": "com.amazonaws.licensemanager#StringList",
                "traits": {

    "smithy.api#documentation": "<p>New license rule. The only rule that you can add after you create a license\n
    configuration is licenseAffinityToHost.</p>"
                }
            },
            "LicenseCount": {
                "target": "com.amazonaws.licensemanager#BoxLong",
                "traits": {
                    "smithy.api#documentation": "<p>New number of licenses managed by the license
configuration.</p>"
                }
            },
            "LicenseCountHardLimit": {
                "target": "com.amazonaws.licensemanager#BoxBoolean",
                "traits": {
```

```
                "smithy.api#documentation": "<p>New hard limit of the number of available licenses.</p>"
              }
            },
            "Name": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>New name
 of the license configuration.</p>"
              }
            },
            "Description": {
              "target": "com.amazonaws.licensemanager#String",
              "traits": {
                "smithy.api#documentation": "<p>New description of the license configuration.</p>"
              }
            },
            "ProductInformationList": {
              "target": "com.amazonaws.licensemanager#ProductInformationList",
              "traits": {
                "smithy.api#documentation": "<p>New product information.</p>"
              }
            },
            "DisassociateWhenNotFound": {
              "target": "com.amazonaws.licensemanager#BoxBoolean",
              "traits": {
                "smithy.api#documentation": "<p>When true, disassociates a resource when software is
uninstalled.</p>"
              }
            }
          },
          "traits":
{
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanager#UpdateLicenseConfigurationResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanager#UpdateLicenseManagerReportGenerator": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanager#UpdateLicenseManagerReportGeneratorRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanager#UpdateLicenseManagerReportGeneratorResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
             },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            },
            {
                "target": "com.amazonaws.licensemanager#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates a report generator.</p>\n        <p>After you make changes to a report generator, it starts generating new reports within 60 minutes of being updated.</p>"
        }
    },
    "com.amazonaws.licensemanager#UpdateLicenseManagerReportGeneratorRequest": {
        "type": "structure",
        "members": {
            "LicenseManagerReportGeneratorArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the report generator to update.</p>",
                    "smithy.api#required": {}
                }
            },
            "ReportGeneratorName": {
                "target": "com.amazonaws.licensemanager#ReportGeneratorName",
                "traits": {
```

```
            "smithy.api#documentation": "<p>Name of the report generator.</p>",
            "smithy.api#required": {}
          }
        },
        "Type": {
          "target": "com.amazonaws.licensemanager#ReportTypeList",
          "traits": {
            "smithy.api#documentation":
 "<p>Type of reports to generate. The following report types are supported:</p>\n        <ul>\n        <li>\n
<p>License configuration report - Reports the number and details of consumed licenses for a license
configuration.</p>\n        </li>\n        <li>\n        <p>Resource report - Reports the tracked licenses and
resource consumption for a license configuration.</p>\n        </li>\n        </ul>",
            "smithy.api#required": {}
          }
        },
        "ReportContext": {
          "target": "com.amazonaws.licensemanager#ReportContext",
          "traits": {
            "smithy.api#documentation": "<p>The report context.</p>",
            "smithy.api#required": {}
          }
        },
        "ReportFrequency": {
          "target": "com.amazonaws.licensemanager#ReportFrequency",
          "traits":
 {
            "smithy.api#documentation": "<p>Frequency by which reports are generated.</p>",
            "smithy.api#required": {}
          }
        },
        "ClientToken": {
          "target": "com.amazonaws.licensemanager#ClientRequestToken",
          "traits": {
            "smithy.api#documentation": "<p>Unique, case-sensitive identifier that you provide to ensure the
idempotency of the request.</p>",
            "smithy.api#required": {}
          }
        },
        "Description": {
          "target": "com.amazonaws.licensemanager#String",
          "traits": {
            "smithy.api#documentation": "<p>Description of the report generator.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
```

```
    },
    "com.amazonaws.licensemanager#UpdateLicenseManagerReportGeneratorResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#UpdateLicenseSpecificationsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#UpdateLicenseSpecificationsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#UpdateLicenseSpecificationsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },

            {
                "target": "com.amazonaws.licensemanager#InvalidResourceStateException"
            },
            {
                "target": "com.amazonaws.licensemanager#LicenseUsageException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds or removes the specified license configurations for the specified
Amazon Web Services resource.</p>\n          <p>You can update the license specifications of AMIs, instances, and
hosts.\n          You cannot update the license specifications for launch templates and CloudFormation templates, \n
 as they send license configurations to the operation that creates the resource.</p>"
        }
    },
```

```
    "com.amazonaws.licensemanager#UpdateLicenseSpecificationsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the Amazon Web Services
resource.</p>",
                    "smithy.api#required": {}
                }
            },
            "AddLicenseSpecifications": {
                "target": "com.amazonaws.licensemanager#LicenseSpecifications",
                "traits": {
                    "smithy.api#documentation": "<p>ARNs of the license configurations to add.</p>"
                }
            },
            "RemoveLicenseSpecifications": {
                "target": "com.amazonaws.licensemanager#LicenseSpecifications",
                "traits": {
                    "smithy.api#documentation":
 "<p>ARNs of the license configurations to remove.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanager#UpdateLicenseSpecificationsForResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanager#UpdateServiceSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanager#UpdateServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanager#UpdateServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanager#AccessDeniedException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanager#AuthorizationException"
            },
            {
                "target": "com.amazonaws.licensemanager#InvalidParameterValueException"
            },
            {
                "target": "com.amazonaws.licensemanager#RateLimitExceededException"
            },
            {
                "target": "com.amazonaws.licensemanager#ServerInternalException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates License Manager settings for the current Region.</p>"
        }
    },
    "com.amazonaws.licensemanager#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "S3BucketArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the Amazon S3 bucket where the License
 Manager information is stored.</p>"
                }
            },
            "SnsTopicArn": {
                "target": "com.amazonaws.licensemanager#String",
                "traits": {
                    "smithy.api#documentation": "<p>Amazon Resource Name (ARN) of the Amazon SNS topic used for License Manager alerts.</p>"
                }
            },
            "OrganizationConfiguration": {
                "target": "com.amazonaws.licensemanager#OrganizationConfiguration",
                "traits": {
                    "smithy.api#documentation": "<p>Enables integration with Organizations for cross-account discovery.</p>"
                }
            },
            "EnableCrossAccountsDiscovery": {
                "target": "com.amazonaws.licensemanager#BoxBoolean",
                "traits": {
                    "smithy.api#documentation": "<p>Activates cross-account discovery.</p>"
```

```
        }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanager#UpdateServiceSettingsResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanager#UsageOperation": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            }
          }
        },
        "com.amazonaws.licensemanager#ValidationException": {
          "type": "structure",
          "members": {
            "Message": {
              "target": "com.amazonaws.licensemanager#Message"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",

         "smithy.api#error": "client",
            "smithy.api#httpError": 400
          }
        }
      }
    }
```


1.79 shared-mime-info 2.4-r2

1.79.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price.
Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software

patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause
any work that you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

c) If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work
are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your

cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates

the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your

school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this
 is what you want to do, use the GNU Lesser General
Public License instead of this License.
The RelaxNG schemas in this directory are available under
under [the W3C Test Suite License](http://www.w3.org/Consortium/Legal/2008/04-testsuite-license.html).

See https://github.com/w3c/its-2.0-testsuite#licensing-information
MSCFF,DYF6Zm COPYINGLG2#YFYF   GNU GENERAL PUBLIC LICENSE
       Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
                    59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

      Preamble

 The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

 When we speak of free software, we are referring to freedom, not
price.
  Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

 To protect your rights, we need to make restrictions that forbid

anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This
License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program

is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices
stating that you changed the files and the date of any change.

b) You must cause any work that
you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

c) If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work are not derived
from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of

this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy
and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial distribution and only if
you
received the program in object code or executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering

access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to

apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM,
TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM
TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software
Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of

MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The
hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License
instead of this License.
Author: devnewton
License: CC-BY-SA

1.80 cpp 14.2.0-r4

1.80.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed
to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute
and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we

want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and

distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in

whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably
considered independent and separate works in
themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work
based on it,
under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are

prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6.
Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free
redistribution of the Program by
all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through
any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the Program
specifies a version
number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE
LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING

OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS),
EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands
 `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

This program, "bzip2", the associated library "libbzip2", and all
documentation, are copyright (C) 1996-2010 Julian R Seward. All
rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.

2. The origin of this software must not be misrepresented; you must
  not claim that you wrote the original software. If you use this
  software in a product, an acknowledgment in the product
  documentation would be appreciated but is not required.

3. Altered source versions must be plainly marked as such, and must
  not be misrepresented as being the original software.

4. The name of the author may not be used to endorse or promote
  products derived from this software without specific
 prior written
  permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, jseward@bzip.org
bzip2/libbzip2 version 1.0.6 of 6 September 2010

GNU Free Documentation License
Version 1.2, November 2002

Copyright (C) 2000-2023 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

0. PREAMBLE

The purpose of this License is to make a manual, textbook, or other
functional and useful document "free" in the sense of freedom: to
assure everyone the effective freedom to copy and redistribute it,
with or without modifying it, either commercially or noncommercially.
Secondarily, this License preserves for the author and publisher a way
to get credit for their work, while not being considered responsible
for modifications made by others.

This License is a kind of "copyleft", which means that derivative
works of the document must themselves be free in the same sense. It
complements the GNU General Public License, which is a copyleft
license designed for free software.

We
have designed this License in order to use it for manuals for free
software, because free software needs free documentation: a free
program should come with manuals providing the same freedoms that the
software does. But this License is not limited to software manuals;
it can be used for any textual work, regardless of subject matter or

whether it is published as a printed book. We recommend this License principally for works whose purpose is instruction or reference.

1. APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that contains a notice placed by the copyright holder saying it can be distributed under the terms of this License. Such a notice grants a world-wide, royalty-free license, unlimited in duration, to use that work under the conditions stated herein. The "Document", below, refers to any such manual or work. Any member of the public is a licensee, and is addressed as "you". You accept the license if you copy, modify
or distribute the work in a way requiring permission
under copyright law.

A "Modified Version" of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A "Secondary Section" is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject (or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics.) The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political position regarding them.

The "Invariant Sections" are certain Secondary Sections whose titles are designated, as being those of Invariant Sections, in the
notice
that says that the Document is released under this License. If a section does not fit the above definition of Secondary then it is not allowed to be designated as Invariant. The Document may contain zero Invariant Sections. If the Document does not identify any Invariant Sections then there are none.

The "Cover Texts" are certain short passages of text that are listed, as Front-Cover Texts or Back-Cover Texts, in the notice that says that the Document is released under this License. A Front-Cover Text may be at most 5 words, and a Back-Cover Text may be at most 25 words.

A "Transparent" copy of the Document means a machine-readable copy, represented in a format whose specification is available to the

general public, that is suitable for revising the document straightforwardly with generic text editors or (for images composed of pixels) generic paint programs or (for drawings) some widely available drawing editor, and that is suitable for input to text formatters or for automatic translation to a variety of formats suitable for input to text formatters. A copy made in an otherwise Transparent file format whose markup, or absence of markup, has been arranged to thwart or discourage subsequent modification by readers is not Transparent. An image format is not Transparent if used for any substantial amount of text. A copy that is not "Transparent" is called "Opaque".

Examples of suitable formats for Transparent copies include plain ASCII without markup, Texinfo input format, LaTeX input format, SGML or XML using a publicly available DTD, and standard-conforming simple HTML, PostScript or PDF designed for human modification. Examples of transparent image formats include PNG, XCF and JPG. Opaque formats include proprietary formats that can be read and edited only by proprietary word processors, SGML or XML for which the DTD and/or processing tools are not generally available, and the machine-generated HTML, PostScript or PDF produced by some word processors for output purposes only.

The "Title Page" means, for a printed book, the title page itself, plus such following pages as are needed to hold, legibly, the material this License requires to appear in the title page. For works in formats which do not have any title page as such, "Title Page" means the text near the most prominent appearance of the work's title, preceding the beginning of the body of the text.

A section "Entitled XYZ" means a named subunit of the Document whose title either is precisely XYZ or contains XYZ in parentheses following text that translates XYZ in another language. (Here XYZ stands for a specific section name mentioned below, such as "Acknowledgements", "Dedications", "Endorsements", or "History".) To "Preserve the Title" of such a section when you modify the Document means that it remains a section "Entitled XYZ" according to this definition.

The Document may include Warranty Disclaimers next to the notice which states that this License applies to the Document. These Warranty Disclaimers are considered to be included by reference in this License, but only as regards disclaiming warranties: any other implication that these Warranty Disclaimers may have is void and has no effect on the meaning of this License.

2. VERBATIM COPYING

You may copy and distribute the Document in any medium, either commercially or noncommercially, provided that this License, the copyright notices, and the license notice saying this License applies to the Document are reproduced in all copies, and that you add no other conditions whatsoever to those of this License. You may not use technical measures to obstruct or control the reading or further copying of the copies you make or distribute. However, you may accept compensation in exchange for copies. If you distribute a large enough number of copies you must also follow the conditions in section 3.

You may also lend copies, under the same conditions stated above, and you may publicly display copies.

3.
COPYING IN QUANTITY

If you publish printed copies (or copies in media that commonly have printed covers) of the Document, numbering more than 100, and the Document's license notice requires Cover Texts, you must enclose the copies in covers that carry, clearly and legibly, all these Cover Texts: Front-Cover Texts on the front cover, and Back-Cover Texts on the back cover. Both covers must also clearly and legibly identify you as the publisher of these copies. The front cover must present the full title with all words of the title equally prominent and visible. You may add other material on the covers in addition. Copying with changes limited to the covers, as long as they preserve the title of the Document and satisfy these conditions, can be treated as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit legibly, you should put the first ones listed (as many as fit reasonably) on the actual cover, and continue the rest onto adjacent
pages.

If you publish or distribute Opaque copies of the Document numbering more than 100, you must either include a machine-readable Transparent copy along with each Opaque copy, or state in or with each Opaque copy a computer-network location from which the general network-using public has access to download using public-standard network protocols a complete Transparent copy of the Document, free of added material. If you use the latter option, you must take reasonably prudent steps, when you begin distribution of Opaque copies in quantity, to ensure that this Transparent copy will remain thus accessible at the stated location until at least one year after the last time you distribute an

Opaque copy (directly or through your agents or retailers) of that edition to the public.

It is requested, but not required, that you contact the authors of the Document well before redistributing any large number of copies, to give them a chance to provide you with an updated version of the Document.

4. MODIFICATIONS

You may copy and distribute a Modified Version of the Document under the conditions of sections 2 and 3 above, provided that you release the Modified Version under precisely this License, with the Modified Version filling the role of the Document, thus licensing distribution and modification of the Modified Version to whoever possesses a copy of it. In addition, you must do these things in the Modified Version:

A. Use in the Title Page (and on the covers, if any) a title distinct from that of the Document, and from those of previous versions (which should, if there were any, be listed in the History section of the Document). You may use the same title as a previous version if the original publisher of that version gives permission.
B. List on the Title Page, as authors, one or more persons or entities responsible for authorship of the modifications in the Modified Version, together with at least five of the principal authors of the Document (all of its principal authors, if it has fewer than five), unless they release you from this requirement.
C. State on the Title page the name of the publisher of the Modified Version, as the publisher.
D. Preserve all the copyright notices of the Document.
E. Add an appropriate copyright notice for your modifications adjacent to the other copyright notices.
F. Include, immediately after the copyright notices, a license notice giving the public permission to use the Modified Version under the terms of this License, in the form shown in the Addendum below.
G. Preserve in that license notice the full lists of Invariant Sections and required Cover Texts given in the Document's license notice.
H. Include an unaltered copy of this License.
I. Preserve the section Entitled "History", Preserve its Title, and add to it an item stating at least the title, year, new authors, and publisher of the Modified Version as given on the Title Page. If there is no section Entitled "History" in the Document, create one stating the title, year, authors, and publisher of the Document as given on its Title Page, then add an item describing the Modified Version as stated in the previous sentence.
J. Preserve the network location, if any, given in the Document for

public access to a Transparent copy of the Document, and likewise
the network locations given in the Document for previous versions
it was based on. These may be placed in the "History" section.
You may omit a network location for a work that was published at
least four years before the Document itself, or if the original
publisher of the version it refers to gives permission.

K. For any section Entitled "Acknowledgements" or "Dedications",
Preserve the Title of the section, and preserve in the section all
the substance and tone of each of the contributor acknowledgements
and/or dedications given therein.

L. Preserve all the Invariant Sections of the Document,
unaltered in their text and in their titles. Section numbers
or the equivalent are not considered part of the section titles.

M. Delete any section Entitled "Endorsements". Such a section
may not be included in the Modified Version.

N. Do not retitle any existing section to be Entitled "Endorsements"
or to conflict in title with any Invariant Section.

O. Preserve any Warranty Disclaimers.

If the Modified Version includes new front-matter sections or
appendices that qualify as Secondary Sections and contain no material
copied from the Document, you may at your option designate some or all
of these sections as invariant. To do this, add their titles to the
list of Invariant Sections in the Modified Version's license notice.
These titles must be distinct from any other section titles.

You may add a section Entitled "Endorsements", provided it contains
nothing but endorsements of your Modified Version by various
parties--for example, statements of peer review or that
the text has
been approved by an organization as the authoritative definition of a
standard.

You may add a passage of up to five words as a Front-Cover Text, and a
passage of up to 25 words as a Back-Cover Text, to the end of the list
of Cover Texts in the Modified Version. Only one passage of
Front-Cover Text and one of Back-Cover Text may be added by (or
through arrangements made by) any one entity. If the Document already
includes a cover text for the same cover, previously added by you or
by arrangement made by the same entity you are acting on behalf of,
you may not add another; but you may replace the old one, on explicit
permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License
give permission to use their names for publicity for or to assert or
imply endorsement of any Modified Version.

5. COMBINING DOCUMENTS

You may combine the Document with other documents released under this License, under the
terms defined in section 4 above for modified
versions, provided that you include in the combination all of the Invariant Sections of all of the original documents, unmodified, and list them all as Invariant Sections of your combined work in its license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and multiple identical Invariant Sections may be replaced with a single copy. If there are multiple Invariant Sections with the same name but different contents, make the title of each such section unique by adding at the end of it, in parentheses, the name of the original author or publisher of that section if known, or else a unique number. Make the same adjustment to the section titles in the list of Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections Entitled "History" in the various original documents, forming one section Entitled "History"; likewise
combine any sections Entitled "Acknowledgements",
and any sections Entitled "Dedications". You must delete all sections Entitled "Endorsements".

6. COLLECTIONS OF DOCUMENTS

You may make a collection consisting of the Document and other documents released under this License, and replace the individual copies of this License in the various documents with a single copy that is included in the collection, provided that you follow the rules of this License for verbatim copying of each of the documents in all other respects.

You may extract a single document from such a collection, and distribute it individually under this License, provided you insert a copy of this License into the extracted document, and follow this License in all other respects regarding verbatim copying of that document.

7. AGGREGATION WITH INDEPENDENT WORKS

A compilation of the Document or its derivatives with other separate and independent documents or works, in or on a volume of a storage or distribution medium,
is called an "aggregate" if the copyright
resulting from the compilation is not used to limit the legal rights

of the compilation's users beyond what the individual works permit. When the Document is included in an aggregate, this License does not apply to the other works in the aggregate which are not themselves derivative works of the Document.

If the Cover Text requirement of section 3 is applicable to these copies of the Document, then if the Document is less than one half of the entire aggregate, the Document's Cover Texts may be placed on covers that bracket the Document within the aggregate, or the electronic equivalent of covers if the Document is in electronic form. Otherwise they must appear on printed covers that bracket the whole aggregate.

8. TRANSLATION

Translation is considered a kind of modification, so you may distribute translations of the Document under the terms of section 4. Replacing Invariant Sections with translations requires special permission from
their copyright holders, but you may include
translations of some or all Invariant Sections in addition to the original versions of these Invariant Sections. You may include a translation of this License, and all the license notices in the Document, and any Warranty Disclaimers, provided that you also include the original English version of this License and the original versions of those notices and disclaimers. In case of a disagreement between the translation and the original version of this License or a notice or disclaimer, the original version will prevail.

If a section in the Document is Entitled "Acknowledgements", "Dedications", or "History", the requirement (section 4) to Preserve its Title (section 1) will typically require changing the actual title.

9. TERMINATION

You may not copy, modify, sublicense, or distribute the Document except as expressly provided for under this License. Any other attempt to copy, modify, sublicense or distribute the Document is void, and will automatically
terminate your rights under this License. However,
parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

10. FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions
of the GNU Free Documentation License from time to time. Such new
versions will be similar in spirit to the present version, but may
differ in detail to address new problems or concerns. See
http://www.gnu.org/copyleft/.

Each version of the License is given a distinguishing version number.
If the Document specifies that a particular numbered version of this
License "or any later version" applies to it, you have the option of
following the terms and conditions either of that specified version or
of any later version that has been published (not as a draft) by the
Free Software Foundation. If the Document does not specify a version
number of this License,
you may choose any version ever published (not
as a draft) by the Free Software Foundation.

ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of
the License in the document and put the following copyright and
license notices just after the title page:

> Copyright (c) YEAR YOUR NAME.
> Permission is granted to copy, distribute and/or modify this document
> under the terms of the GNU Free Documentation License, Version 1.2
> or any later version published by the Free Software Foundation;
> with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts.
> A copy of the license is included in the section entitled "GNU
> Free Documentation License".

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts,
replace the "with...Texts." line with this:

> with the Invariant Sections being LIST THEIR TITLES, with the
> Front-Cover Texts being LIST, and with the Back-Cover Texts
> being LIST.

If you have Invariant Sections without Cover Texts, or some other
combination of the three, merge those two alternatives to suit the
situation.

If your document contains nontrivial examples of program code, we
recommend releasing these examples in parallel under your choice of
free software license, such as the GNU General Public License,
to permit their use in free software.

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them

with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software
patents pose a constant threat to the existence of
any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits
such linking only if the
entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it

becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or

derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding
machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library". Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that uses
the
library". The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library. The
threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work. (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may
distribute the object
code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or
link a "work that uses the Library" with the Library to produce a

work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the
work with the complete corresponding
machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly
with a modified version of the library, if
the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the

Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally
distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any
other library
facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you
do not accept this License. Therefore, by
modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying

the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse
you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system
which is
implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those

countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

13. The Free Software Foundation may publish
revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this. Our
decision will
be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE
LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A

FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James

Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
The libffi source distribution contains certain code that is not part
of libffi, and is only used as tooling to assist with the building and
testing of libffi. This includes the msvcc.sh script used to wrap the
Microsoft compiler with GNU compatible command-line options,
make_sunver.pl, and the libffi test code distributed in the
testsuite/libffi.bhaible directory. This code is distributed with
libffi for the purpose of convenience only, and libffi is in no way
derived from this code.

msvcc.sh an testsuite/libffi.bhaible are both distributed under the
terms of the GNU GPL version 2, as below.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software
are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions
that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by
others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program
or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not

covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you

distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component

itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals

of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY
AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve
this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more
details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work
as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.

==========

The LLVM Project is under the Apache License v2.0 with LLVM Exceptions:

==========

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the
power, direct or indirect, to cause the
direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached
to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions

to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition,
"submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity
on behalf of whom a Contribution has been received by Licensor and
subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
copyright license to reproduce, prepare Derivative
Works of,
publicly display, publicly perform, sublicense, and distribute the
Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
(except as stated in this section) patent license to make, have made,
use, offer to sell, sell, import, and otherwise transfer the Work,
where such license applies only to those patent claims licensable
by such Contributor that are necessarily infringed by their
Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work
includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional
attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License
does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the

origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including
negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such
obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier

identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

---- LLVM Exceptions to the Apache 2.0 License ----

As an exception, if, as a result of your compiling your source code, portions
of this Software are embedded into an Object form of such source code, you
may redistribute such embedded portions in such Object form without complying
with the conditions of Sections 4(a), 4(b) and 4(d) of the License.

In addition, if you combine or link compiled
forms of this Software with
software that is licensed under the GPLv2 ("Combined Software") and if a
court of competent jurisdiction determines that the patent provision (Section
3), the indemnity provision (Section 9) or other Section of the License
conflicts with the conditions of the GPLv2, you may retroactively and
prospectively choose to deem waived or otherwise exclude such Section(s) of
the License, but only in their entirety and only with respect to the Combined
Software.

==
Software from third parties included in the LLVM Project:
==
The LLVM Project contains third party software which is under different license
terms. All such code will be identified clearly using at least one of two
mechanisms:
1) It will be in a separate directory tree with its own `LICENSE.txt` or
`LICENSE` file at the top containing the specific
license and restrictions
which apply to that software, or
2) It will contain specific license and restriction terms at the top of every
file.

==

Legacy LLVM License (https://llvm.org/docs/DeveloperPolicy.html#legacy):
==

The software contained in this directory tree is dual licensed under both the
University of Illinois "BSD-Like" license and the MIT license. As a user of
this code you may choose to use it under either license. As a contributor,
you agree to allow your code to be used under both.

Full text of the relevant licenses is included below.

==

University of Illinois/NCSA
Open Source License

Copyright (c) 2017-2019 by the contributors listed in CREDITS.TXT

All rights reserved.

Developed by:
Threading Runtimes Team
Intel Corporation
http://www.intel.com

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal with
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

* Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimers.

* Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimers in the
documentation and/or other materials provided with the distribution.

* Neither the names of Intel Corporation Threading Runtimes Team nor the
names of its contributors may be used to endorse or promote products
derived from
this Software without specific prior written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,

OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE SOFTWARE.

==========

Copyright (c) 2017-2019 by the contributors listed in CREDITS.TXT

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software,
and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide to use it. You
can use it too, but we

suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use,
not price. Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights. These restrictions translate to certain responsibilities for
you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the
recipients all the rights that we gave
you. You must make sure that they, too, receive or can get the source
code. If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them
with the library after making changes to the library and recompiling
it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the
library, and (2) we offer you this license, which gives you legal
permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that
there is no warranty for the free library. Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation will not be affected by problems that might be
introduced by others.

Finally, software patents pose a constant threat to the existence
of
any free program. We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder. Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License. This license, the GNU Lesser
General Public License, applies to certain designated libraries, and

is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination
fits its criteria of freedom. The Lesser General
Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we
use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without
limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish
on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library

with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public
License instead of this License
to a given copy of the Library. To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License. (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.) Do not make any other change in
these notices.

Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be
distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library". Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that uses the
library". The executable is therefore covered
by this License.
Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any
executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable
source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the
user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed

under the terms of the
Sections above.

b) Give prominent notice with the combined library of the fact
that part of it is a work based on the Library, and explaining
where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying
or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute
so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any

particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing

and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL
DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line
and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either

version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You
should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization
obtaining a copy of the software and accompanying documentation covered by
this license (the "Software") to use, reproduce, display, distribute,
execute, and transmit the Software, and to prepare derivative works of the
Software, and to permit third-parties to whom the Software is furnished to
do so, all subject to the following:

The copyright notices in the Software and this entire statement, including
the above license grant, this restriction and the following disclaimer,
must be included in all copies of the Software, in whole or in part, and
all derivative works of the Software, unless such copies or derivative
works are solely in the form of machine-executable object code generated by
a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS
FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT
SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE
FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE,
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER

DEALINGS IN THE SOFTWARE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of,

the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity
on behalf of whom a Contribution has been received by Licensor and
subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
copyright license to reproduce, prepare Derivative Works of,
publicly display, publicly perform, sublicense, and distribute the
Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
this License,
each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
(except as stated in this section) patent license to make, have made,
use, offer to sell, sell, import, and otherwise transfer the Work,
where such license applies only to those patent claims licensable
by such Contributor that are necessarily infringed by their
Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You

meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate

comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Copyright (c) 2011 University of Illinois at Urbana-Champaign. All rights reserved.

Developed by: Polaris Research Group
University of Illinois at Urbana-Champaign
http://polaris.cs.uiuc.edu

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal with the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

1. Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimers.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimers in the
documentation and/or other materials provided with the distribution.
3. Neither the names of Polaris Research Group, University of Illinois at
Urbana-Champaign, nor the names of its contributors may be used to endorse
or promote products derived from this Software without specific prior
written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
WITH THE SOFTWARE.

GCC RUNTIME LIBRARY EXCEPTION

Version 3.1, 31 March 2009

Copyright (C) 2009 Free Software Foundation, Inc. <http://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies of this
license document, but changing it is not allowed.

This GCC Runtime Library Exception ("Exception") is an additional
permission under section 7 of the GNU General Public License, version
3 ("GPLv3"). It applies to a given file (the "Runtime Library") that
bears a notice placed by the copyright holder of the file stating that
the file is governed by GPLv3 along with this Exception.

When you use GCC to compile a program, GCC may combine portions of
certain GCC header files and runtime libraries with the compiled
program. The purpose of this Exception is to allow compilation of
non-GPL (including proprietary) programs to use, in this way, the
header files and runtime libraries covered by this Exception.

0. Definitions.

A file is an "Independent Module" if it either requires the Runtime
Library
 for execution after a Compilation Process, or makes use of an
interface provided by the Runtime Library, but is not otherwise based
on the Runtime Library.

"GCC" means a version of the GNU Compiler Collection, with or without
modifications, governed by version 3 (or a specified later version) of
the GNU General Public License (GPL) with the option of using any
subsequent versions published by the FSF.

"GPL-compatible Software" is software whose conditions of propagation,
modification and use would permit combination with GCC in accord with
the license of GCC.

"Target Code" refers to output from any compiler for a real or virtual
target processor architecture, in executable form or suitable for
input to an assembler, loader, linker and/or execution
phase. Notwithstanding that, Target Code does not include data in any
format that is used as a compiler intermediate representation, or used
for producing a compiler intermediate representation.

The "Compilation Process" transforms code
 entirely represented in
non-intermediate languages designed for human-written code, and/or in

Java Virtual Machine byte code, into Target Code. Thus, for example, use of source code generators and preprocessors need not be considered part of the Compilation Process, since the Compilation Process can be understood as starting with the output of the generators or preprocessors.

A Compilation Process is "Eligible" if it is done using GCC, alone or with other GPL-compatible software, or if it is done without using any work based on GCC. For example, using non-GPL-compatible Software to optimize any GCC intermediate representations would not qualify as an Eligible Compilation Process.

1. Grant of Additional Permission.

You have permission to propagate a work of Target Code formed by combining the Runtime Library with Independent Modules, even if such propagation would otherwise violate the terms of GPLv3, provided that all Target Code was generated by Eligible Compilation Processes. You may
then convey such a combination under terms of your choice, consistent with the licensing of the Independent Modules.

2. No Weakening of GCC Copyleft.

The availability of this Exception does not imply any general presumption that third-party software is unaffected by the copyleft requirements of the license of GCC.
libffi - Copyright (c) 1996-2021 Anthony Green, Red Hat, Inc and others.
See source files for details.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the ``Software''), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED ``AS IS'', WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF
CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE

SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
GCC RUNTIME LIBRARY EXCEPTION

Version 3.1, 31 March 2009

Copyright (C) 2009-2023 Free Software Foundation, Inc. <http://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies of this
license document, but changing it is not allowed.

This GCC Runtime Library Exception ("Exception") is an additional
permission under section 7 of the GNU General Public License, version
3 ("GPLv3"). It applies to a given file (the "Runtime Library") that
bears a notice placed by the copyright holder of the file stating that
the file is governed by GPLv3 along with this Exception.

When you use GCC to compile a program, GCC may combine portions of
certain GCC header files and runtime libraries with the compiled
program. The purpose of this Exception is to allow compilation of
non-GPL (including proprietary) programs to use, in this way, the
header files and runtime libraries covered by this Exception.

0. Definitions.

A file is an "Independent Module" if it either requires the Runtime
Library
 for execution after a Compilation Process, or makes use of an
interface provided by the Runtime Library, but is not otherwise based
on the Runtime Library.

"GCC" means a version of the GNU Compiler Collection, with or without
modifications, governed by version 3 (or a specified later version) of
the GNU General Public License (GPL) with the option of using any
subsequent versions published by the FSF.

"GPL-compatible Software" is software whose conditions of propagation,
modification and use would permit combination with GCC in accord with
the license of GCC.

"Target Code" refers to output from any compiler for a real or virtual
target processor architecture, in executable form or suitable for
input to an assembler, loader, linker and/or execution
phase. Notwithstanding that, Target Code does not include data in any
format that is used as a compiler intermediate representation, or used
for producing a compiler intermediate representation.

The "Compilation Process" transforms

code entirely represented in
non-intermediate languages designed for human-written code, and/or in
Java Virtual Machine byte code, into Target Code. Thus, for example,
use of source code generators and preprocessors need not be considered
part of the Compilation Process, since the Compilation Process can be
understood as starting with the output of the generators or
preprocessors.

A Compilation Process is "Eligible" if it is done using GCC, alone or
with other GPL-compatible software, or if it is done without using any
work based on GCC. For example, using non-GPL-compatible Software to
optimize any GCC intermediate representations would not qualify as an
Eligible Compilation Process.

1. Grant of Additional Permission.

You have permission to propagate a work of Target Code formed by
combining the Runtime Library with Independent Modules, even if such
propagation would otherwise violate the terms of GPLv3, provided that
all Target Code was generated by Eligible Compilation Processes.
You
may then convey such a combination under terms of your choice,
consistent with the licensing of the Independent Modules.

2. No Weakening of GCC Copyleft.

The availability of this Exception does not imply any general
presumption that third-party software is unaffected by the copyleft
requirements of the license of GCC.
This source code was written by the Go contributors.
The master list of contributors is in the main Go distribution,
visible at http://tip.golang.org/CONTRIBUTORS.
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
The files gnupng and gnu.eps are part of GNU Modula-2.

Copyright (C) 2005-2023 Free Software Foundation, Inc.

This file is part of GNU Modula-2.

GNU Modula-2 is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 3, or (at your option)
any later version.

GNU Modula-2 is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with GNU Modula-2; see the file COPYING. If not, write to the
Free Software Foundation, 51 Franklin Street, Fifth Floor, Boston, MA
02110-1301, USA. */

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for
software and other kinds of works.

The licenses for most software and other practical works are designed
to take away your freedom to share and change the works. By contrast,
the GNU General Public License is intended to guarantee your freedom to
share and change all versions of a program--to make sure it remains free

software for all its users. We, the Free Software Foundation, use the
GNU General Public License for most of our software; it applies also to
any other work released this way by its authors. You can apply it to
your programs, too.

When we speak of free software, we are referring to
freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
them if you wish), that you receive source code or can get it if you
want it, that you can change the software or use pieces of it in new
free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you
these rights or asking you to surrender the rights. Therefore, you have
certain responsibilities if you distribute copies of the software, or if
you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must pass on to the recipients the same
freedoms that you received. You must make sure that they, too, receive
or can get the source code. And you must show them these terms so they
know their rights.

Developers that use the GNU GPL protect your rights with two steps:
(1)
assert copyright on the software, and (2) offer you this License
giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains
that there is no warranty for this free software. For both users' and
authors' sake, the GPL requires that modified versions be marked as
changed, so that their problems will not be attributed erroneously to
authors of previous versions.

Some devices are designed to deny users access to install or run
modified versions of the software inside them, although the manufacturer
can do so. This is fundamentally incompatible with the aim of
protecting users' freedom to change the software. The systematic
pattern of such abuse occurs in the area of products for individuals to
use, which is precisely where it is most unacceptable. Therefore, we
have designed this version of the GPL to prohibit the practice for those
products. If such problems arise substantially in other domains, we
stand
ready to extend this provision to those domains in future versions
of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents.

States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the

work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered
by this License only if the output, given its
content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed;
section 10
makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately

publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any
non-permissive terms added in accord with section 7 apply to the code;
keep intact all notices of the absence of any warranty; and give all
recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey,
and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to
produce it from the Program, in the form of source code under the
terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified
it, and giving a relevant date.

b) The work must carry prominent notices stating that it is
released under this License and any conditions added under section
7. This requirement modifies the requirement in section
4 to
"keep intact all notices".

c) You must license the entire work, as a whole, under this
License to anyone who comes into possession of a copy. This
License will therefore apply, along with any applicable section 7
additional terms, to the whole of the work, and all its parts,
regardless of how they are packaged. This License gives no
permission to license the work in any other way, but it does not
invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display
Appropriate Legal Notices; however, if the Program has interactive
interfaces that do not display Appropriate Legal Notices, your
work need not make them do so.

A compilation of a covered work with other separate and independent
works, which are not by their nature extensions of the covered work,
and which are not combined with it such as to form a larger program,
in or on a volume of a storage or distribution
medium, is called an
"aggregate" if the compilation and its resulting copyright are not
used to limit the access or legal rights of the compilation's users
beyond what the individual works permit. Inclusion of a covered work
in an aggregate does not cause this License to apply to the other
parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no

charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or authors of the material; or

e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above
requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright

holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered

work, then the patent license
you grant is automatically extended to all recipients of the covered
work and works based on it.

A patent license is "discriminatory" if it does not include within
the scope of its coverage, prohibits the exercise of, or is
conditioned on the non-exercise of one or more of the rights that are
specifically granted under this License. You may not convey a covered
work if you are a party to an arrangement with a third party that is
in the business of distributing software, under which you make payment
to the third party based on the extent of your activity of conveying
the work, and under which the third party grants, to any of the
parties who would receive the covered work from you, a discriminatory
patent license (a) in connection with copies of the covered work
conveyed by you (or copies made from those copies), or (b) primarily
for and in connection with specific products or compilations that
contain the covered work, unless you entered into that arrangement,
or
that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting
any implied license or other defenses to infringement that may
otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot convey a
covered work so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you may
not convey it at all. For example, if you agree to terms that obligate you
to collect a royalty for further conveying from those to whom you convey
the Program, the only way you could satisfy both those terms and this
License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have
permission to link or combine any covered work with a work licensed
under version 3 of the GNU Affero General Public License into a single
combined work, and to convey the resulting work. The terms of this
License will continue to apply to the part which is the covered work,
but the special requirements of the GNU Affero General Public License,
section 13, concerning interaction through a network will apply to the
combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF

SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program. If not, see <http://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<http://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want to
do, use the GNU Lesser General
Public License instead of this License. But first, please read
<http://www.gnu.org/philosophy/why-not-lgpl.html>.
GNU LESSER GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates
the terms and conditions of version 3 of the GNU General Public
License, supplemented by the additional permissions listed below.

0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser
General Public License, and the "GNU GPL" refers to version 3 of the GNU
General Public License.

"The Library" refers to a covered work governed by this License,
other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided
by the Library, but which is not otherwise based on the Library.
Defining a subclass of a class defined by the Library is
deemed a mode
of using an interface provided by the Library.

A "Combined Work" is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the "Linked Version".

The "Minimal Corresponding Source" for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The "Corresponding Application Code" for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

2. Conveying
Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or

b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data
structure
layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

a) Give prominent notice with each copy of the object code that the

Library is used in it and that the Library and its use are
covered by this License.

b) Accompany the object code with a copy of the GNU GPL and this license
document.

4. Combined Works.

You may convey a Combined Work under terms of your choice that,
taken together, effectively do not restrict modification of the
portions of the Library contained in the Combined Work and reverse
engineering for debugging such modifications, if you also do each of
the following:

a) Give prominent notice with each copy of the Combined Work that
the Library is used in it and that the Library and its use are
covered by this License.

b) Accompany the Combined Work with a copy of the GNU GPL and this license
document.

c) For a Combined Work that displays copyright
notices during
execution, include the copyright notice for the Library among
these notices, as well as a reference directing the user to the
copies of the GNU GPL and this license document.

d) Do one of the following:

0) Convey the Minimal Corresponding Source under the terms of this
License, and the Corresponding Application Code in a form
suitable for, and under terms that permit, the user to
recombine or relink the Application with a modified version of
the Linked Version to produce a modified Combined Work, in the
manner specified by section 6 of the GNU GPL for conveying
Corresponding Source.

1) Use a suitable shared library mechanism for linking with the
Library. A suitable mechanism is one that (a) uses at run time
a copy of the Library already present on the user's computer
system, and (b) will operate properly with a modified version
of the Library that is interface-compatible
with the Linked
Version.

e) Provide Installation Information, but only if you would otherwise
be required to provide such information under section 6 of the
GNU GPL, and only to the extent that such information is

necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.

b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the

Library.

==

compiler_rt License

==

The compiler_rt library is dual licensed under both the University of Illinois
"BSD-Like" license and the MIT license. As a user of this code you may choose
to use it under either license. As a contributor, you agree to allow your code
to be used under both.

Full text of the relevant licenses is included below.

==

University of Illinois/NCSA
Open Source License

Copyright (c) 2009-2012 by the contributors listed in CREDITS.TXT

All rights reserved.

Developed by:

  LLVM Team

  University of Illinois at Urbana-Champaign

  http://llvm.org

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal with
the Software without restriction,
 including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

  * Redistributions of source code must retain the above copyright notice,
    this list of conditions and the following disclaimers.

  * Redistributions in binary form must reproduce the above copyright notice,
    this list of conditions and the following disclaimers in the
    documentation and/or other materials provided with the distribution.

  * Neither the names of the LLVM Team, University of Illinois at
    Urbana-Champaign, nor the names of its contributors may be used to
    endorse or promote products derived from this Software without specific
    prior written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE SOFTWARE.

==========

Copyright (c) 2009-2012 by the contributors listed in CREDITS.TXT

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or
substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

==========

Copyrights and Licenses for Third Party Software Distributed with LLVM:

==========

The LLVM software contains code written by third parties. Such software will
have its own individual LICENSE.TXT file in the directory in which it appears.
This file will describe the copyrights, license, and restrictions which apply
to that code.

The disclaimer of
warranty in the University of Illinois Open Source License
applies to all code in the LLVM Distribution, and nothing in any of the
other licenses gives permission to use the names of the LLVM Team or the
University of Illinois to endorse or promote products derived from this
Software.

The following pieces of software have additional or alternate copyrights,
licenses, and/or restrictions:

Program	Directory
mach_override	lib/interception/mach_override

UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

Unicode Data Files include all data files under the directories
http://www.unicode.org/Public/, http://www.unicode.org/reports/, and
http://www.unicode.org/cldr/data/. Unicode Data Files do not include PDF
online code charts under the directory http://www.unicode.org/Public/.
Software includes any source code published in the Unicode Standard or under
the directories http://www.unicode.org/Public/,
http://www.unicode.org/reports/, and http://www.unicode.org/cldr/data/.

NOTICE TO USER: Carefully read the following legal agreement. BY
DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S DATA FILES
("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"), YOU UNEQUIVOCALLY ACCEPT, AND
AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF
YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA
FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright 1991-2013 Unicode,
Inc. All rights reserved. Distributed under
the Terms of Use in http://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining a
copy of the Unicode data files and any associated documentation (the "Data
Files") or Unicode software and any associated documentation (the "Software")
to deal in the Data Files or Software without restriction, including without
limitation the rights to use, copy, modify, merge, publish, distribute, and/or
sell copies of the Data Files or Software, and to permit persons to whom the
Data Files or Software are furnished to do so, provided that (a) the above
copyright notice(s) and this permission notice appear with all copies of the
Data Files or Software, (b) both the above copyright notice(s) and this
permission notice appear in associated documentation, and (c) there is clear
notice in each modified Data File or in the Software as well as in the
documentation associated with the Data File(s) or Software
that the data or
software has been modified.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY
KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD
PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN

THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.
Copyright (c) 2019 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.81 aws-sdk-go-v2-service-dynamodbstreams 1.30.2

1.81.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

```
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
```

```
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
```

This member is required.
ClientToken *string

// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

```
 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
```

UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step

ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint

```
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
```

```
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
```

```
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
```

```
            },
            "ActiveDirectoryType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
         "type": "structure",
         "members": {
            "DomainName": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
               }
            },
            "DomainIpv4List": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
               "traits": {
                  "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 2
                  }
               }
            },
            "DomainCredentialsProvider": {
               "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
               }
            },
            "DomainNetworkSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
               }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http":
{
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
```

```
            }
          },
           "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

    "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
```

```
        "members": {
            "message": {
                "target": "smithy.api#String"
             }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

       {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
```

```
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
```

```
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
         ],
         "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
```

```
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
```

```
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
               }
```

```
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
                  "min": 1
                },

      "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Filter": {
          "type": "structure",
          "members": {
            "Attribute": {
              "target": "smithy.api#String",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
              }
            },
            "Operation": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
              }
            },
            "Value": {
              "target": "smithy.api#String",
              "traits":
{
                "smithy.api#documentation": "<p>Value of the filter.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
          "type": "union",
          "members": {
            "ActiveDirectoryIdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
               "traits": {
                "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },

    "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
```

```
            }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
          }
        },
        "AssociationDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
          }
        },
        "DisassociationDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
```

```
        "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

           "x-api-key",
              "authorization",
              "x-amz-date",
```

```
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
                    "type": "String"
                }
            },
```

```
"rules": [
  {
    "conditions": [
      {
        "fn": "isSet",
        "argv": [
          {
            "ref": "Endpoint"
          }
        ]
      }
    ],
    "rules": [
      {
        "conditions": [
          {
            "fn": "booleanEquals",
            "argv": [
              {
                "ref": "UseFIPS"
              },
              true
            ]
          }
        ],
        "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
        "type": "error"
      },
      {
        "conditions": [
          {

            "fn": "booleanEquals",
            "argv": [
              {
                "ref": "UseDualStack"
              },
              true
            ]
          }
        ],
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
        "type": "error"
      },
      {
        "conditions": [],
        "endpoint": {
          "url": {
```

```
                        "ref": "Endpoint"
                    },

        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "aws.partition",

                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseFIPS"
                                        },

true
                                    ]
```

```
                },
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

"fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },

                    {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }

            ]
                        }
                    ],
```

```
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
                                "argv": [
```

```
                {
                                "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                        ]
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [],
                "endpoint": {

    "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "FIPS is enabled but this partition does not support FIPS",
        "type": "error"

}
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [
                    {
                        "ref": "UseDualStack"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
```

```
        "conditions": [
                                {
                                   "fn": "booleanEquals",
                                   "argv": [
                                      true,
                                      {
                                         "fn": "getAttr",
                                         "argv": [
                                            {
                                               "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                         ]

        }
                                   ]
                                }
                             ],
                             "rules": [
                                {
                                   "conditions": [],
                                   "endpoint": {
                                      "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                      "properties": {},
                                      "headers": {}
                                   },
                                   "type": "endpoint"
                                }

                          ],
                                "type": "tree"
                             },
                             {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                             }
                          ],
                          "type": "tree"
                       },
                       {
                          "conditions": [],
                          "endpoint": {
                             "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
```

```
                "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
      }
    ]
  },
  "smithy.rules#endpointTests": {
    "testCases": [
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
        "expect":
{
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-east-1",

    "UseFIPS": true,
          "UseDualStack": false
        }
      },
```

```
                {
                  "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS":
 true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                    }
```

```
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
```

```
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
         "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
```

```
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
```

```
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
 false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
 disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
          "expect": {
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true,
```

```
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "Missing region",
                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
      }
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
      "ProvisioningStatus": {
        "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
        "traits": {
          "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
        }
      },
      "HealthStatus": {
        "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
        "traits": {
          "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
        }
      },
      "Ipv4Address": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
    "type": "structure",
    "members": {
```

```
        "IdentityProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
          }
        },
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>"
          }
        },
        "ServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits":
 {
            "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
          }
        },
        "LicenseServerEndpointId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
          }
        },
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
          }
        },
        "LicenseServerEndpointProvisioningStatus": {
          "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
           "traits": {
            "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
          }
```

```
            },
            "LicenseServers": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
               }
            },
            "CreationTime": {
               "target": "smithy.api#Timestamp",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
         "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "PROVISIONING",
                  "value": "PROVISIONING",
                  "documentation": ""
               },
               {
                  "name": "PROVISIONING_FAILED",

                 "value": "PROVISIONING_FAILED",
                  "documentation": ""
               },
               {
                  "name": "PROVISIONED",
                  "value": "PROVISIONED",
```

```
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
       "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "InstanceSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
               }
            },
            "NextToken":
 {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
               }
            },
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>InstanceId</p>\n
</li>\n       </ul>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
         "type": "structure",
          "members": {
            "InstanceSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
 {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
```

```
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
         },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
```

```
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
"<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

         "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
```

```
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
```

```
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
     },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
       }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/identity-provider/RegisterIdentityProvider"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
    "type": "structure",
    "members": {
      "IdentityProvider": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to register.</p>",
              "smithy.api#required": {}
            }
          },

      "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration \n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
```

```
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                  "smithy.api#required": {}
                }
              }
            },
            "traits": {
              "smithy.api#output": {}
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
            "type": "operation",
            "input": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
            },
            "output": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
            },
            "errors": [
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
              },
              {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
              }
            ],
            "traits": {
              "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
              "smithy.api#http":
```

```
{
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/identity-provider/UpdateIdentityProviderSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
      "type": "structure",
       "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the identity provider to
update. "
}
},
"UpdateSettings":
{
"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
"traits": {
"smithy.api#documentation": " Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the: \n
\n \n Subnets which you want to add to provision VPC endpoints. \n \n
\n Subnets which you want to remove the VPC endpoints from. \n \n
\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
```

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string
```

```
 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
```

```
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
 err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
```

```
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
```

```
 return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
```

```
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
```

```
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string
```

```
// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string
```

```
 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
```

```
//
the request.
//
// This member is required.
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string
```

```
// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
```

```
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
```

```
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
```

```
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
```

GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE

```
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata
```

```
 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
```

```
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:       region,
 ServiceID:
   ServiceID,
 OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
 spanInitializeStart
 InterceptExecution
 RegisterServiceMetadata
 legacyEndpointContextSetter
 SetLogger
 OperationInputValidation
 spanInitializeEnd
 Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
 Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
 Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
 Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
```

CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

       "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
```

```
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
```

```
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

    "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
```

```
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
          }
        },
        "SubscriptionProviderUpdateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
          }
        },
        "DualSubscription": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
          }
```

```
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
            "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
```

```
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
```

```
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }

    ],
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                    "type": "error"
                },
                {
                    "conditions": [],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseDualStack"
                                        },
                                        true
                                    ]

}
                            ],
                            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                            "type": "error"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": {
                                    "ref": "Endpoint"
                                },
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
```

```
            "type": "tree"

        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "isSet",
                        "argv": [
                            {
                                "ref": "Region"
                            }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {

        "fn": "aws.partition",
                                "argv": [
                                    {
                                        "ref": "Region"
                                    }
                                ],
                                "assign": "PartitionResult"
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {

                                      "ref": "UseFIPS"
                                            },
                                            true
                                        ]
                                    },
                                    {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }

  ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"

        },
                                "supportsFIPS"
                            ]
                          }
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [

                             {
                                  "ref": "PartitionResult"
                              },
                              "supportsDualStack"
                            ]
                          }
                        ]
                      }
                    ],
                    "rules": [
                      {
```

```
                "conditions": [],

        "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],

            "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {

        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [
                    {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
```

```
                "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
                  "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "FIPS is enabled
 but this partition does not support FIPS",
              "type": "error"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
```

```
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "ref": "UseDualStack"
                                            },
                                            true

                                ]
                                    }
                                ],
                                "rules": [
                                    {
                                        "conditions": [
                                            {
                                                "fn": "booleanEquals",
                                                "argv": [
                                                    true,
                                                    {
                                                        "fn": "getAttr",
                                                        "argv": [
                                                            {

                                                                "ref": "PartitionResult"
                                                            },
                                                            "supportsDualStack"
                                                        ]
                                                    }
                                                ]
                                            }
                                        ],
                                        "rules": [
                                            {
                                                "conditions": [],
                                                "rules": [

        {
                                                        "conditions": [],
                                                        "endpoint": {
                                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                            "properties": {},
                                                            "headers": {}
                                                        },
                                                        "type": "endpoint"
                                                    }
                                                ],
                                                "type": "tree"
```

```
                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
],
"type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
```

```
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
        }
```

```
    },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
          }
         },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
```

```
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

         },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
          },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
```

```
    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
                      }
                    },
                    "params": {
                      "Region": "us-isob-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
                    },
                    "params": {
                      "Region": "us-isob-east-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://example.com"
                      }
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },

          {
                    "documentation": "For custom endpoint with region not set and fips disabled and dualstack
  disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://example.com"
```

```
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "Enabled",
                    "value": "Enabled",
                    "documentation": "Enabled LinuxSubscriptionsDiscovery"
                },
                {
                    "name": "Disabled",
                    "value": "Disabled",
                    "documentation": "Disabled LinuxSubscriptionsDiscovery"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
            "SourceRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "OrganizationIntegration": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
                "traits": {
                    "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
 </p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
 <li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
```

```
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
   <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
          <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListLinuxSubscriptions"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "Subscriptions"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
      "type": "structure",
      "members": {
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

        "traits": {
            "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
```

```
match a certain subscription's name.</p>\n        <p>The valid names for this filter are:</p>\n        <ul>\n
<li>\n            <p>\n                <code>Subscription</code>\n            </p>\n        </li>\n        </ul>\n
<p>The valid Operators for this filter are:</p>\n        <ul>\n        <li>\n            <p>\n
<code>contains</code>\n            </p>\n        </li>\n        <li>\n            <p>\n
<code>equals</code>\n            </p>\n        </li>\n        <li>\n            <p>\n
        <code>Notequal</code>\n            </p>\n        </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 16384
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
            "Subscriptions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"
```

```
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",
```

```
    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
         },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
```

```
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
              },
              {

        "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat
Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
```

```
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
```

```
    "traits": {
      "smithy.api#enum": [
        {
          "name": "InProgress",
          "value": "InProgress",
          "documentation": "InProgress status"
        },
        {
          "name": "Completed",
          "value": "Completed",
          "documentation": "Completed status"
        },
        {
          "name": "Successful",
          "value": "Successful",
          "documentation": "Successful status"
        },
        {
          "name": "Failed",
          "value": "Failed",
          "documentation": "Failed status"
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String",
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        }
      }
    },
    "traits": {
      "smithy.api#length": {
        "min": 1,
        "max": 100
      },
      "smithy.api#uniqueItems": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
      "target": "smithy.api#String"
```

```
        },
        "value": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
"list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
```

```
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
```

```
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
```

```
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
              "method": "DELETE",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
          "type": "structure",

       "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
{}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
```

```
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
          }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
            }

      },
          "Status": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,

and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work,

excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions

of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.82 brotli 1.2.0

1.82.1 Available under license :

MIT

1.83 busybox 1.37.0-r13

1.83.1 Available under license :

bzip2 applet in busybox is based on lightly-modified source
of bzip2 version 1.0.4. bzip2 source is distributed
under the following conditions (copied verbatim from LICENSE file)
==========

This program, "bzip2", the associated library "libbzip2", and all
documentation, are copyright (C) 1996-2006 Julian R Seward. All
rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

2. The origin of this software must not be misrepresented; you must
not claim that you wrote the original software. If you use this
software in a product, an acknowledgment in the product
documentation would be appreciated but is not required.

3. Altered source versions must be plainly marked as such, and must

not be misrepresented
as being the original software.

4. The name of the author may not be used to endorse or promote
products derived from this software without specific prior written
permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, Cambridge, UK.
jseward@bzip.org
bzip2/libbzip2 version 1.0.4 of 20 December 2006
--- A note on GPL versions

BusyBox is distributed under version 2 of the General Public License (included
in its entirety, below). Version 2 is the only version of this license which
this version of BusyBox (or modified versions derived from this one) may be
distributed under.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's
software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by

the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for
a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent
this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed

under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this
License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and
copy and
distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this

License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for

making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict

the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of

this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make
exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED
ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where

the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice
 like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of
Vice

This General Public License does not permit incorporating your program into

proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

1.84 musl 1.2.5-r9

1.84.1 Available under license :

musl as a whole is licensed under the following standard MIT license:

Copyright 2005-2020 Rich Felker, et al.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
 LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Authors/contributors include:

A. Wilcox
Ada Worcester
Alex Dowad
Alex Suykov
Alexander Monakov
Andre McCurdy
Andrew Kelley
Anthony G. Basile
Aric Belsito
Arvid Picciani
Bartosz Brachaczek

Benjamin Peterson
Bobby Bingham
Boris Brezillon
Brent Cook
Chris Spiegel
Clment Vasseur
Daniel Micay
Daniel Sabogal
Daurnimator
David Carlier
David Edelsohn
Denys Vlasenko
Dmitry Ivanov
Dmitry V. Levin
Drew DeVault
Emil Renner Berthing
Fangrui Song
Felix Fietkau
Felix Janda
Gianluca Anzolin
Hauke Mehrtens
He X
Hiltjo Posthuma
Isaac Dunham
Jaydeep Patil
Jens Gustedt
Jeremy Huntwork
Jo-Philipp Wich
Joakim Sindholt
John Spencer
Julien Ramseier
Justin Cormack
Kaarle Ritvanen
Khem Raj
Kylie McClain
Leah Neukirchen
Luca Barbato
Luka
Perkov
M Farkas-Dyck (Strake)
Mahesh Bodapati
Markus Wichmann
Masanori Ogino
Michael Clark
Michael Forney
Mikhail Kremnyov
Natanael Copa
Nicholas J. Kain

orc
Pascal Cuoq
Patrick Oppenlander
Petr Hosek
Petr Skocik
Pierre Carrier
Reini Urban
Rich Felker
Richard Pennington
Ryan Fairfax
Samuel Holland
Segev Finer
Shiz
sin
Solar Designer
Stefan Kristiansson
Stefan O'Rear
Szabolcs Nagy
Timo Ters
Trutz Behn
Valentin Ochs
Will Dietz
William Haddon
William Pitcock

Portions of this software are derived from third-party works licensed
under terms compatible with the above MIT license:

The TRE regular expression implementation (src/regex/reg* and
src/regex/tre*) is Copyright 2001-2008 Ville Laurikari and licensed
under a 2-clause BSD license (license text in the source files). The
included version has been heavily modified by Rich Felker in 2012, in
the interests of size, simplicity, and namespace cleanliness.

Much of the math library code (src/math/* and src/complex/*) is
Copyright 1993,2004
 Sun Microsystems or
Copyright 2003-2011 David Schultz or
Copyright 2003-2009 Steven G. Kargl or
Copyright 2003-2009 Bruce D. Evans or
Copyright 2008 Stephen L. Moshier or
Copyright 2017-2018 Arm Limited
and labelled as such in comments in the individual source files. All
have been licensed under extremely permissive terms.

The ARM memcpy code (src/string/arm/memcpy.S) is Copyright 2008
The Android Open Source Project and is licensed under a two-clause BSD
license. It was taken from Bionic libc, used on Android.

The AArch64 memcpy and memset code (src/string/aarch64/*) are
Copyright 1999-2019, Arm Limited.

The implementation of DES for crypt (src/crypt/crypt_des.c) is
Copyright 1994 David Burren. It is licensed under a BSD license.

The implementation of blowfish crypt (src/crypt/crypt_blowfish.c) was
originally written by Solar Designer and placed into the public
domain. The code also comes with a fallback permissive license for use
in jurisdictions that may not recognize the
 public domain.

The smoothsort implementation (src/stdlib/qsort.c) is Copyright 2011
Valentin Ochs and is licensed under an MIT-style license.

The x86_64 port was written by Nicholas J. Kain and is licensed under
the standard MIT terms.

The mips and microblaze ports were originally written by Richard
Pennington for use in the ellcc project. The original code was adapted
by Rich Felker for build system and code conventions during upstream
integration. It is licensed under the standard MIT terms.

The mips64 port was contributed by Imagination Technologies and is
licensed under the standard MIT terms.

The powerpc port was also originally written by Richard Pennington,
and later supplemented and integrated by John Spencer. It is licensed
under the standard MIT terms.

All other files which have no copyright comments are original works
produced specifically for use as part of this library, written either
by Rich Felker, the main author of the library, or by one or more
contibutors listed
 above. Details on authorship of individual files
can be found in the git version control history of the project. The
omission of copyright and license comments in each file is in the
interest of source tree size.

In addition, permission is hereby granted for all public header files
(include/* and arch/*/bits/*) and crt files intended to be linked into
applications (crt/*, ldso/dlstart.c, and arch/*/crt_arch.h) to omit
the copyright notice and permission notice otherwise required by the
license, and to use these files without any requirement of
attribution. These files include substantial contributions from:

Bobby Bingham

John Spencer
Nicholas J. Kain
Rich Felker
Richard Pennington
Stefan Kristiansson
Szabolcs Nagy

all of whom have explicitly granted such permission.

This file previously contained text expressing a belief that most of
the files covered by the above exception were sufficiently trivial not
to be subject to copyright, resulting in confusion over whether it
negated
 the permissions granted in the license. In the spirit of
permissive licensing, and of not having licensing issues being an
obstacle to adoption, that text has been removed.

1.85 libuv 1.49.2

1.85.1 Available under license :

Attribution 4.0 International

===

Creative Commons Corporation ("Creative Commons") is not a law firm and
does not provide legal services or legal advice. Distribution of
Creative Commons public licenses does not create a lawyer-client or
other relationship. Creative Commons makes its licenses and related
information available on an "as-is" basis. Creative Commons gives no
warranties regarding its licenses, any material licensed under their
terms and conditions, or any related information. Creative Commons
disclaims all liability for damages resulting from their use to the
fullest extent possible.

Using Creative Commons Public Licenses

Creative Commons public licenses provide a standard set of terms and
conditions that creators and other rights holders may use to share
original works of authorship and other material subject to copyright
and certain other rights specified in the public license below. The
following considerations
 are for informational purposes only, are not
exhaustive, and do not form part of our licenses.

Considerations for licensors: Our public licenses are
intended for use by those authorized to give the public
permission to use material in ways otherwise restricted by

copyright and certain other rights. Our licenses are irrevocable. Licensors should read and understand the terms and conditions of the license they choose before applying it. Licensors should also secure all rights necessary before applying our licenses so that the public can reuse the material as expected. Licensors should clearly mark any material not subject to the license. This includes other CC-licensed material, or material used under an exception or limitation to copyright. More considerations for licensors:
wiki.creativecommons.org/Considerations_for_licensors

Considerations for the public: By using one of our public licenses, a licensor
grants the public permission to use the licensed material under specified terms and conditions. If the licensor's permission is not necessary for any reason--for example, because of any applicable exception or limitation to copyright--then that use is not regulated by the license. Our licenses grant only permissions under copyright and certain other rights that a licensor has authority to grant. Use of the licensed material may still be restricted for other reasons, including because others have copyright or other rights in the material. A licensor may make special requests, such as asking that all changes be marked or described. Although not required by our licenses, you are encouraged to respect those requests where reasonable. More_considerations for the public:
wiki.creativecommons.org/Considerations_for_licensees

==========

Creative Commons Attribution 4.0 International Public License

By exercising the Licensed Rights (defined below), You accept and agree to be bound by the terms and conditions of this Creative Commons Attribution 4.0 International Public License ("Public License"). To the extent this Public License may be interpreted as a contract, You are granted the Licensed Rights in consideration of Your acceptance of these terms and conditions, and the Licensor grants You such rights in consideration of benefits the Licensor receives from making the Licensed Material available under these terms and conditions.

Section 1 -- Definitions.

a. Adapted Material means material subject to Copyright and Similar Rights that is derived from or based upon the Licensed Material

and in which the Licensed Material is translated, altered, arranged, transformed, or otherwise modified in a manner requiring permission under the Copyright and Similar Rights held by the Licensor. For purposes of this Public License, where the Licensed Material is a musical work, performance, or sound recording, Adapted Material is always produced where the Licensed Material is synched in timed relation with a moving image.

b. Adapter's License means the license You apply to Your Copyright and Similar Rights in Your contributions to Adapted Material in accordance with the terms and conditions of this Public License.

c. Copyright and Similar Rights means copyright and/or similar rights closely related to copyright including, without limitation, performance, broadcast, sound recording, and Sui Generis Database Rights, without regard to how the rights are labeled or categorized. For purposes of this Public License, the rights specified in Section 2(b)(1)-(2) are not Copyright and Similar Rights.

d. Effective Technological Measures means those measures that, in the absence of proper authority, may not be circumvented under laws fulfilling obligations under Article 11 of the WIPO Copyright Treaty adopted on December 20, 1996, and/or similar international agreements.

e. Exceptions and Limitations means fair use, fair dealing, and/or any other exception or limitation to Copyright and Similar Rights that applies to Your use of the Licensed Material.

f. Licensed Material means the artistic or literary work, database, or other material to which the Licensor applied this Public License.

g. Licensed Rights means the rights granted to You subject to the terms and conditions of this Public License, which are limited to all Copyright and Similar Rights that apply to Your use of the Licensed Material and that the Licensor has authority to license.

h. Licensor means the individual(s) or entity(ies) granting rights under this Public License.

i. Share means to provide material to the public by any means or process that requires permission under the Licensed Rights, such as reproduction, public display, public performance, distribution, dissemination, communication, or importation, and to make material

available to the public including in ways that members of the public may access the material from a place and at a time individually chosen by them.

j. Sui Generis Database Rights means rights other than copyright resulting from Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, as amended and/or succeeded, as well as other essentially equivalent rights anywhere in the world.

k. You means the individual or entity exercising the Licensed Rights under this Public License. Your has a corresponding meaning.

Section 2 -- Scope.

a. License grant.

1. Subject to the terms and conditions of this Public License, the Licensor hereby grants You a worldwide, royalty-free, non-sublicensable, non-exclusive, irrevocable license to exercise the Licensed Rights in the Licensed Material to:

a. reproduce and Share the Licensed Material, in whole or in part; and

b. produce, reproduce, and Share Adapted Material.

2. Exceptions and Limitations. For the avoidance of doubt, where Exceptions and Limitations apply to Your use, this Public License does not apply, and You do not need to comply with its terms and conditions.

3. Term. The term of this Public License is specified in Section 6(a).

4. Media and formats; technical modifications allowed. The Licensor authorizes You to exercise the Licensed Rights in all media and formats whether now known or hereafter created, and to make technical modifications necessary to do so. The Licensor waives and/or agrees not to assert any right or authority to forbid You from making technical modifications necessary to exercise the Licensed Rights, including technical modifications necessary to circumvent Effective Technological Measures. For purposes of this Public License, simply making modifications authorized by this Section 2(a)(4) never produces Adapted Material.

5. Downstream recipients.

a. Offer from the Licensor -- Licensed Material. Every recipient of the Licensed Material automatically receives an offer from the Licensor to exercise the Licensed Rights under the terms and conditions of this Public License.

b. No downstream restrictions. You may not offer or impose any additional or different terms or conditions on, or apply any Effective Technological Measures to, the Licensed Material if doing so restricts exercise of the Licensed Rights by any recipient of the Licensed

Material.

6. No endorsement. Nothing in this Public License constitutes or may be construed as permission to assert or imply that You are, or that Your use of the Licensed Material is, connected with, or sponsored, endorsed, or granted official status by, the Licensor or others designated to receive attribution as provided in Section 3(a)(1)(A)(i).

b. Other rights.

1. Moral rights, such as the right of integrity, are not licensed under this Public License, nor are publicity, privacy, and/or other similar personality rights; however, to the extent possible, the Licensor waives and/or agrees not to assert any such rights held by the Licensor to the limited extent necessary to allow You to exercise the Licensed Rights, but not otherwise.

2. Patent and trademark rights are not licensed under this Public License.

3. To the extent
possible, the Licensor waives any right to
collect royalties from You for the exercise of the Licensed Rights, whether directly or through a collecting society under any voluntary or waivable statutory or compulsory licensing scheme. In all other cases the Licensor expressly reserves any right to collect such royalties.

Section 3 -- License Conditions.

Your exercise of the Licensed Rights is expressly made subject to the following conditions.

a. Attribution.

1. If You Share the Licensed Material (including in modified form), You must:

a. retain the following if it is supplied by the Licensor with the Licensed Material:

i. identification of the creator(s) of the Licensed Material and any others designated to receive attribution, in any reasonable manner requested by the Licensor (including by pseudonym if

designated);

ii. a copyright notice;

iii. a notice that refers to this Public License;

iv. a notice that refers to the disclaimer of warranties;

v. a URI or hyperlink to the Licensed Material to the extent reasonably practicable;

b. indicate if You modified the Licensed Material and retain an indication of any previous modifications; and

c. indicate the Licensed Material is licensed under this Public License, and include the text of, or the URI or hyperlink to, this Public License.

2. You may satisfy the conditions in Section 3(a)(1) in any reasonable manner based on the medium, means, and context in which You Share the Licensed Material. For example, it may be reasonable to satisfy the conditions by providing a URI or hyperlink to a resource that
includes the required
information.

3. If requested by the Licensor, You must remove any of the information required by Section 3(a)(1)(A) to the extent reasonably practicable.

4. If You Share Adapted Material You produce, the Adapter's

License You apply must not prevent recipients of the Adapted Material from complying with this Public License.

Section 4 -- Sui Generis Database Rights.

Where the Licensed Rights include Sui Generis Database Rights that apply to Your use of the Licensed Material:

a. for the avoidance of doubt, Section 2(a)(1) grants You the right to extract, reuse, reproduce, and Share all or a substantial portion of the contents of the database;

b. if You include all or a substantial portion of the database contents in a database in which You have Sui Generis Database Rights, then the database in which You have Sui Generis Database Rights (but not its individual contents) is Adapted Material; and

c. You must comply with the conditions in Section 3(a) if You Share all or a substantial portion of the contents of the database.

For the avoidance of doubt, this Section 4 supplements and does not replace Your obligations under this Public License where the Licensed Rights include other Copyright and Similar Rights.

Section 5 -- Disclaimer of Warranties and Limitation of Liability.

a. UNLESS OTHERWISE SEPARATELY UNDERTAKEN BY THE LICENSOR, TO THE EXTENT POSSIBLE, THE LICENSOR OFFERS THE LICENSED MATERIAL AS-IS AND AS-AVAILABLE, AND MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND CONCERNING THE LICENSED MATERIAL, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHER. THIS INCLUDES, WITHOUT LIMITATION, WARRANTIES OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OR ABSENCE OF ERRORS, WHETHER OR NOT KNOWN OR DISCOVERABLE.
WHERE DISCLAIMERS OF WARRANTIES ARE NOT ALLOWED IN FULL OR IN PART, THIS DISCLAIMER MAY NOT APPLY TO YOU.

b. TO THE EXTENT POSSIBLE, IN NO EVENT WILL THE LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE) OR OTHERWISE FOR ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY, OR OTHER LOSSES, COSTS, EXPENSES, OR DAMAGES ARISING OUT OF THIS PUBLIC LICENSE OR USE OF THE LICENSED MATERIAL, EVEN IF THE LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES, COSTS, EXPENSES, OR

DAMAGES. WHERE A LIMITATION OF LIABILITY IS NOT ALLOWED IN FULL OR IN PART, THIS LIMITATION MAY NOT APPLY TO YOU.

c. The disclaimer of warranties and limitation of liability provided above shall be interpreted in a manner that, to the extent possible, most closely approximates an absolute disclaimer and waiver of all liability.

Section 6 -- Term and Termination.

a. This Public License applies for the term of the Copyright and Similar Rights licensed here. However, if You fail to comply with this Public License, then Your rights under this Public License terminate automatically.

b. Where Your right to use the Licensed Material has terminated under Section 6(a), it reinstates:

1. automatically as of the date the violation is cured, provided it is cured within 30 days of Your discovery of the violation; or

2. upon express reinstatement by the Licensor.

For the avoidance of doubt, this Section 6(b) does not affect any right the Licensor may have to seek remedies for Your violations of this Public License.

c. For the avoidance of doubt, the Licensor may also offer the Licensed Material under separate terms or conditions or stop distributing the Licensed Material at any time; however, doing so will not terminate this Public License.

d. Sections 1, 5, 6, 7, and 8 survive termination of this Public License.

Section 7 -- Other Terms and Conditions.

a. The Licensor shall not be bound by any additional or different terms or conditions communicated by You unless expressly agreed.

b. Any arrangements, understandings, or agreements regarding the Licensed Material not stated herein are separate from and independent of the terms and conditions of this Public License.

Section 8 -- Interpretation.

a. For the avoidance of doubt, this Public License does not, and shall not be interpreted to, reduce, limit, restrict, or impose conditions on any use of the Licensed Material that could lawfully be made without permission under this Public License.

b. To the extent possible, if any provision of this Public License is deemed unenforceable, it shall be automatically reformed to the minimum extent necessary to make it enforceable. If the provision cannot be reformed, it shall be severed from this Public License without affecting the enforceability of the remaining terms and conditions.

c. No term or condition of this Public License will be waived and no failure to comply consented to unless expressly agreed to by the Licensor.

d. Nothing in this Public License constitutes or may be interpreted as a limitation upon, or waiver of, any privileges and immunities that apply to the Licensor or You, including from the legal processes of any jurisdiction or authority.

==========

Creative Commons is not a party to its public licenses. Notwithstanding, Creative Commons may elect to apply one of its public licenses to material it publishes and in those instances will be considered the Licensor. The text of the Creative Commons public licenses is dedicated to the public domain under the CC0 Public Domain Dedication. Except for the limited purpose of indicating that material is shared under a Creative Commons public license or as otherwise permitted by the Creative Commons policies published at creativecommons.org/policies, Creative Commons does not authorize the use of the trademark "Creative Commons" or any other trademark or logo of Creative Commons without its prior written consent including, without limitation, in connection with any unauthorized modifications to any of its public licenses or any other arrangements, understandings, or agreements concerning use of licensed material. For the avoidance of doubt, this paragraph does not form part of the public licenses.

Creative Commons may be contacted at creativecommons.org.

Copyright (c) 2015-present libuv project contributors.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR
IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
IN THE SOFTWARE.
This license applies to parts of libuv originating from the
https://github.com/joyent/libuv repository:

====

Copyright Joyent, Inc. and other Node contributors. All rights reserved.
Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
IN THE SOFTWARE.

====

This license applies to all parts of libuv that are not externally

maintained libraries.

The externally maintained libraries used by libuv are:

- tree.h (from FreeBSD), copyright Niels Provos. Two clause BSD license.

- inet_pton and inet_ntop implementations, contained in src/inet.c, are
  copyright the Internet Systems Consortium, Inc., and licensed under the ISC
  license.

1.86 klauspost-compress 1.18.0

1.86.1 Available under license :

Copyright (c) 2015, Pierre Curto
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this
 list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice,
 this list of conditions and the following disclaimer in the documentation
 and/or other materials provided with the distribution.

* Neither the name of xxHash nor the names of its
 contributors may be used to endorse or promote products derived from
 this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR
 CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER
CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
This is the official list of people who can contribute
(and typically have contributed) code to the Snappy-Go repository.
The AUTHORS file lists the copyright holders; this file
lists people. For example, Google employees are listed here
but not in AUTHORS, because Google holds the copyright.
#

The submission process automatically checks to make sure
that people submitting code are listed in this file (by email address).
#
Names should be added to this file only after verifying that
the individual or the individual's organization has agreed to
the appropriate Contributor License Agreement, found here:
#
http://code.google.com/legal/individual-cla-v1.0.html
http://code.google.com/legal/corporate-cla-v1.0.html
#
The agreement for individuals can be filled out on the web.
#
When adding J Random Contributor's name to this file,
either J's name or J's organization's name should be
added to the AUTHORS file, depending on whether the
individual or corporate
 CLA was used.

Names should be added to this file like so:
Name <email address>

Please keep the list sorted.

Alex Legg <alexlegg@google.com>
Damian Gryski <dgryski@gmail.com>
Eric Buth <eric@topos.com>
Jan Mercl <0xjnml@gmail.com>
Jonathan Swinney <jswinney@amazon.com>
Kai Backman <kaib@golang.org>
Klaus Post <klauspost@gmail.com>
Marc-Antoine Ruel <maruel@chromium.org>
Nigel Tao <nigeltao@golang.org>
Rob Pike <r@golang.org>
Rodolfo Carvalho <rhcarvalho@gmail.com>
Russ Cox <rsc@golang.org>
Sebastien Binet <seb.binet@gmail.com>
The MIT License (MIT)

Copyright (c) 2015 Klaus Post

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all

copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
The MIT License (MIT)

Copyright (c) 2016 Evan Huus
Copyright (c) 2023 Klaus Post

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (c) 2011 The Snappy-Go Authors. All rights reserved.
Copyright (c) 2019 Klaus Post. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from

this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright 2016 The filepathx Authors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition,

"control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and

subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding

those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise,

unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2016-2017 The New York Times Company

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Copyright (c) 2016 Caleb Spare

MIT License

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH
 THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (c) 2012 The Go Authors. All rights reserved.
Copyright (c) 2019 Klaus Post. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE
 ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,

DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Files: gzhttp/*

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work

(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version
of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received
by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s)
alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a

cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files;
and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally
appear. The contents
of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall
be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS
FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't
include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2016-2017 The New York Times Company

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Files: s2/cmd/internal/readahead/*

The MIT License
(MIT)

Copyright (c) 2015 Klaus Post

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Files: snappy/*
Files: internal/snapref/*

Copyright (c) 2011 The Snappy-Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED
TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Files: s2/cmd/internal/filepathx/*

Copyright 2016 The filepathx Authors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (c) 2011 The Snappy-Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.87 pax-utils 1.3.8-r1

1.87.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses
are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission
to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we

want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and

distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program
in object code or executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled
to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are

prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based
on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit
royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute
software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the Program
specifies
a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED
BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING

OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version
2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical
commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

1.88 aws-sdk-go-v2-service-internal-s3shared 1.19.6

1.88.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength

```
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
```

```
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
```

```
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}
```

```
func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
```

```
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
```

Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader

```
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
  - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
```

```
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
```

```
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
```

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
```

```
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
```

```
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n        <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
                }
            },
```

```
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
               }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
         "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
             }
         },
         "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current
state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
         },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

       {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
    "type": "union",
```

```
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoint": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
               "traits": {
                  "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
               }
            }
         },
          "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n <p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}

    }
     },
     "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
     },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
        "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the user.</p>"
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based subscriptions.</p>"
            }
        },
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
            }
```

```
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
                  "min": 1
                },

    "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Filter": {
          "type": "structure",
          "members": {
            "Attribute": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
              }
            },
            "Operation": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
              }
            },
            "Value": {
              "target": "smithy.api#String",
              "traits":
{
                "smithy.api#documentation": "<p>Value of the filter.</p>"
              }
            }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
```

```
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
```

```
"type": "service",
"version": "2018-05-10",
"operations": [
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
    },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
    },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
   },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager User Subscriptions",
                "arnNamespace": "license-manager-user-subscriptions",
                "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
                "name": "license-manager-user-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
                "additionalAllowedHeaders": [
                    "*",
                    "content-type",
                    "x-amz-content-sha256",
                    "x-amz-user-agent",
                    "x-amzn-platform-id",
                    "x-amzn-trace-id",
                    "content-length",

             "x-api-key",
                    "authorization",
                    "x-amz-date",
                    "x-amz-security-token",
                    "Access-Control-Allow-Headers",
                    "Access-Control-Allow-Methods",
                    "Access-Control-Allow-Origin"
                ],
                "additionalExposedHeaders": [
                    "x-amzn-errortype",
                    "x-amzn-requestid",
                    "x-amzn-trace-id"
                ]
            },
            "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager User Subscriptions",
            "smithy.rules#endpointRuleSet": {
                "version": "1.0",
                "parameters": {
```

```
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
                    "type": "String"
                }
            },
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Endpoint"
                                }
                            ]
                        }
                     ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
```

```
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [
                  {

                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
```

```
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

true

```
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
```

```
  "fn": "booleanEquals",
                                        "argv": [
                                          true,
                                          {
                                            "fn": "getAttr",
                                            "argv": [
                                              {
                                                "ref": "PartitionResult"
                                              },
                                              "supportsFIPS"
                                            ]
                                          }
                                        ]
                                      },

                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                          true,
                                          {
                                            "fn": "getAttr",
                                            "argv": [
                                              {
                                                "ref": "PartitionResult"
                                              },
                                              "supportsDualStack"
                                            ]
                                          }

                                ]
                                      }
                                    ],
                                    "rules": [
                                      {
                                        "conditions": [],
                                        "endpoint": {
                                          "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                          "properties": {},
                                          "headers": {}
                                        },
                                        "type": "endpoint"
                                      }

    ],
                                    "type": "tree"
                                  },
                                  {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [

 {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [

{
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

    "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

    }
                            ]
                        }
```

```
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }

                                ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                        "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
```

```
        "smithy.rules#endpointTests": {
          "testCases": [
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
              "expect":
{
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint":
```

```
{
                        "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS":
true,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint":
{
                        "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
```

```
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
           "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
           "UseDualStack": false
        }
```

```
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
 false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
```

```
                        "url": "https://example.com"
                    }
                },
                "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                    "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                 }
            },
            {
                "documentation": "Missing region",
                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
      }
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
```

```
            "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
            },
            "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
                }
            },
            "Ipv4Address": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
```

\n\t\t\taddress of the RDS license server endpoint. "
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": " The message associated with the provisioning status, if there is one. "
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": " The ID of the license server endpoint. "
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": " The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server. "
            }
          },
          "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
              "smithy.api#documentation": " The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint "
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": " An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint. "
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": " The timestamp when License Manager created the license server endpoint. "
            }
          }
        },
        "traits": {

```
            "smithy.api#documentation":
"<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "PROVISIONING",
                    "value": "PROVISIONING",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONING_FAILED",

                  "value": "PROVISIONING_FAILED",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONED",
                    "value": "PROVISIONED",
                    "documentation": ""
                },
                {
                    "name": "DELETING",
                    "value": "DELETING",
                    "documentation": ""
                },
                {
                    "name": "DELETION_FAILED",
                    "value": "DELETION_FAILED",
                    "documentation": ""
                },
                {
                    "name": "DELETED",
                    "value": "DELETED",
                    "documentation": ""
                }
```

```
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "HEALTHY",
                    "value": "HEALTHY",
                    "documentation": ""
                },
                {
                    "name": "UNHEALTHY",
                    "value": "UNHEALTHY",
                    "documentation": ""
                },
                {
                    "name": "NOT_APPLICABLE",
                    "value": "NOT_APPLICABLE",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>",
                    "smithy.api#required": {}
                }
            },
            "ServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                    "smithy.api#required": {}
                }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
```

```
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
</li>\n       </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
 {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
                 "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
```

```
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

        "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
```

```
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/user/ListUserAssociations"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
 "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {

           "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
```

```
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a product for this user.</p>",
            "smithy.api#required": {}
          }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
          }
        },
        "SubscriptionStartDate": {
          "target": "smithy.api#String",
          "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
          }
        },
        "SubscriptionEndDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The end date of a subscription.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                    "smithy.api#required": {}
                }
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration \n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
```

```
      "traits": {
        "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
        "smithy.api#error": "client",
        "smithy.api#httpError": 404
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
```

```
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/StartProductSubscription"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
```

<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}

}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
"traits": {
"smithy.api#documentation": " The tags that apply to the product subscription. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
"type": "structure",
"members": {
"ProductUserSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the start product subscription
operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
},

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
          "smithy.api#http":
 {
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
```

```
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
```

```
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
```

```
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
```

```
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
```

```
"com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
   "type": "structure",
   "members": {
      "ResourceArn": {
         "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
         "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
         }
      },
      "TagKeys": {
         "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
         "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
             "smithy.api#required": {}
         }
      }
   },
   "traits": {
      "smithy.api#input": {}
   }
},
"com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
   "type": "structure",
   "members": {},
   "traits": {
      "smithy.api#output": {}
   }
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
   "type": "operation",
   "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
   },
   "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
   },
   "errors": [
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

},
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
                }
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n            <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
```

\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
"traits": {
"smithy.api#documentation": " The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers. ",
"smithy.api#required":
{}
}
},
"RemoveSubnets": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
"traits": {
"smithy.api#documentation": " The ID of one or more subnets to remove. ",
"smithy.api#required": {}
}
},
"SecurityGroupId": {
"target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
"traits": {
"smithy.api#documentation": " A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers. "

```
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
      }
   }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
```

```
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
```

```
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
```

DisassociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

```
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string
```

```
 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
```

```
 params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string
```

```
 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
```

```
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
```

```
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
```

```
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
```

```
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
```

```
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType
```

```
 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
```

```
 return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
```

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
```

```
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
```

InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
```

```
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
           "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of name to filter by.</p>"
           }
        },
        "Values": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
          }
        },
        "Operator": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
          "traits": {
            "smithy.api#documentation": "<p>An operator for filtering results.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
            }
        },
        "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

      "traits": {
                "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
            }
        },
        "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
        },
        "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
                "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
             }
        },
        "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
        },
        "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
```

```
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
```

```
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
              "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
          },
          "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
```

```
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
      "type": "service",
      "version": "2018-05-10",
      "operations": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
         },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
                 "type": "Boolean"
              },
```

```
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }

        ],
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [],
                  "rules": [
                    {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"

        }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
```

```
                {
                  "conditions": [
                    {

            "fn": "aws.partition",
                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {

                        "ref": "UseFIPS"
                            },
                            true
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {
                              "ref": "UseDualStack"
                            },
                            true
                          ]
                        }

],
                      "rules": [
                        {
                          "conditions": [
                            {
                              "fn": "booleanEquals",
                              "argv": [
                                true,
                                {
                                  "fn": "getAttr",
                                  "argv": [
                                    {
```

```
                                        "ref": "PartitionResult"

                    },
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [

                                     {
                                        "ref": "PartitionResult"
                                    },
                                    "supportsDualStack"
                                ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {

      "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

            "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [
                      {
                        "conditions": [],
```

```
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled
but this partition does not support FIPS",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true

                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
```

```
                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

        {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ],
 "type": "tree"
 }
 ]
},
"smithy.rules#endpointTests": {
 "testCases": [
  {
   "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
   "expect": {
    "endpoint": {
     "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

 }
   },
   "params": {
    "Region": "us-east-1",
    "UseFIPS": true,
    "UseDualStack": true
   }
  },
  {
   "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
   "expect": {
    "endpoint": {
     "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
    }
   },
   "params": {
    "Region": "us-east-1",
```

```
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {

    "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                }

    },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
```

```
"documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                      }
                     },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": true
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {

 "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                      }
                    },
                    "params": {
                      "Region": "us-gov-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

     },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }

        },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },

    {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {

      "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
```

```
                    "expect": {
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                        "Region": "us-east-1",
                        "UseFIPS": false,
                        "UseDualStack": true,
                        "Endpoint": "https://example.com"
                    }
                },
                {
                    "documentation": "Missing region",

                "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
    "type": "structure",
    "members": {
        "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
        "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
            <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
```

```
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional
  objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
```

```
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Subscriptions"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
              },
              "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
              },
              "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                    "min": 1,
                    "max": 16384
```

```
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
          "type": "structure",
          "members": {
            "Subscriptions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
              "traits": {
                "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional objects.</p>"

              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
          "type": "operation",
          "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
          },
          "output": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
          ],
          "traits": {
            "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

     "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
 return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
 nextToken from a previously truncated response.</p>"
              }
            }
          },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
            "RegisteredSubscriptionProviders": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
                "traits": {
                    "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}

              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "EQUAL",
                "value": "Equal",
```

```
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
```

```
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },

         {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
             "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
```

```
          "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
                }
            },
            "SubscriptionProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
```

```
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
      "type": "list",
      "member": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "InProgress",
                "value": "InProgress",
                "documentation": "InProgress status"
               },
              {
                "name": "Completed",
                "value": "Completed",
                "documentation": "Completed status"
              },
              {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
              },
              {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
              }
            ]
```

```
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#length": {
                    "min": 1,
                    "max": 100
                }
            }
        },
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            },
            "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the subscription.</p>"
                }
            },
            "Type": {
                "target": "smithy.api#String",
                "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
                }
```

```
            },
            "InstanceCount": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
               "traits": {
                  "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
         "type": "list",

       "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "RedHat",
                  "value": "RedHat",
                  "documentation": "RedHat subscription provider namespace"
               }
            ]
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
         "type":
 "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
         "type": "string",
         "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
```

```
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
```

```
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
 {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
```

```
Region.</p>"
                }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their

Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf

of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step

ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization

OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.89 libgcc 14.2.0-r4

1.89.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed
to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute
and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free

program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work
which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim
copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices
stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in

whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

c) If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work are not derived from the Program,
and can be reasonably
considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work
based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three

years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code
or executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy
the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6.
Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free
redistribution of the Program by
all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through
any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among

countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

This program, "bzip2", the associated library "libbzip2", and all
documentation, are copyright (C) 1996-2010 Julian R Seward. All
rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.

2. The origin of this software must not be misrepresented; you must
  not claim that you wrote the original software. If you use this
  software in a product, an acknowledgment in the product
  documentation would be appreciated but is not required.

3. Altered source versions must be plainly marked as such, and must
  not be misrepresented as being the original software.

4. The name of the author may not be used to endorse or promote
  products derived from this software without specific
 prior written
  permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL

DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, jseward@bzip.org
bzip2/libbzip2 version 1.0.6 of 6 September 2010

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide
to use it. You
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations
below.

When we speak of free software, we are referring to freedom of use,
not price. Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs

(which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify

that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative

work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object
code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the
work with the complete corresponding
machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly
with a modified version of the library, if
the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in

Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally
distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any
other library
facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies,

or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that

system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE

LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software

Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301
USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or
your school, if any, to sign a "copyright disclaimer" for the library,
if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James
Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
The libffi source distribution contains certain code that is not part
of libffi, and is only used as tooling to assist with the building and
testing of libffi. This includes the msvcc.sh script used to wrap the
Microsoft compiler with GNU compatible command-line options,
make_sunver.pl, and the libffi test code distributed in the
testsuite/libffi.bhaible directory. This code is distributed with
libffi for the purpose of convenience only, and libffi is in no way
derived from this code.

msvcc.sh an testsuite/libffi.bhaible are both distributed under the
terms of the GNU GPL version 2, as below.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software
are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to

using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions
that forbid
anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by
others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains

a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program
or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program
a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices
stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

c) If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the
most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide

a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the
scripts used to
control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have
received copies, or rights, from you under
this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You
are not responsible for enforcing compliance by third parties to
this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues),

conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance
of the section is intended to
apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright
holder who places the Program under this License
may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions

either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively

convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

  <one line to give the program's name and a brief idea of what it does.>
  Copyright (C) <year> <name of author>

  This program is free software; you can redistribute it and/or modify
  it under the terms of the GNU General Public License as published by
  the Free Software Foundation; either version 2 of the License, or
  (at your option) any later version.

  This program is distributed in the hope that it will be useful,
  but WITHOUT ANY WARRANTY; without even the implied warranty of
  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
  GNU General Public License for more
details.

  You should have received a copy of the GNU General Public License along
  with this program; if not, write to the Free Software Foundation, Inc.,
  51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

  Gnomovision version 69, Copyright (C) year name of author
  Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
  This is free software, and you are welcome to redistribute it
  under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work
 as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into

proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
==
The LLVM Project is under the Apache License v2.0 with LLVM Exceptions:
==

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the
power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached
to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct

or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,

any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License
does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including
negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such
obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

---- LLVM Exceptions to the Apache 2.0 License ----

As an exception, if, as a result of your compiling your source code, portions
of this Software are embedded into an Object form of such source code, you
may redistribute such embedded portions in such Object form without complying
with the conditions of Sections 4(a), 4(b) and 4(d) of the License.

In addition, if you combine or link compiled
forms of this Software with
software that is licensed under the GPLv2 ("Combined Software") and if a
court of competent jurisdiction determines that the patent provision (Section
3), the indemnity provision (Section 9) or other Section of the License
conflicts with the conditions of the GPLv2, you may retroactively and
prospectively choose to deem waived or otherwise exclude such Section(s) of
the License, but only in their entirety and only with respect to the Combined
Software.

==========
Software from third parties included in the LLVM Project:
==========

The LLVM Project contains third party software which is under different license
terms. All such code will be identified clearly using at least one of two
mechanisms:
1) It will be in a separate directory tree with its own `LICENSE.txt` or
  `LICENSE` file at the top containing the specific
 license and restrictions
  which apply to that software, or
2) It will contain specific license and restriction terms at the top of every
  file.

==
Legacy LLVM License (https://llvm.org/docs/DeveloperPolicy.html#legacy):
==

The software contained in this directory tree is dual licensed under both the
University of Illinois "BSD-Like" license and the MIT license. As a user of
this code you may choose to use it under either license. As a contributor,
you agree to allow your code to be used under both.

Full text of the relevant licenses is included below.

==

University of Illinois/NCSA
Open Source License

Copyright (c) 2017-2019 by the contributors listed in CREDITS.TXT

All rights reserved.

Developed by:
   Threading Runtimes Team
   Intel Corporation
    http://www.intel.com

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal with
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

   * Redistributions of source code must retain the above copyright notice,
     this list of conditions and the following disclaimers.

   * Redistributions in binary form must reproduce the above copyright notice,
     this list of conditions and the following disclaimers in the
     documentation and/or other materials provided with the distribution.

* Neither the names of Intel Corporation Threading Runtimes Team nor the
names of its contributors may be used to endorse or promote products
derived from
this Software without specific prior written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE SOFTWARE.

==========

Copyright (c) 2017-2019 by the contributors listed in CREDITS.TXT

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software,
and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we
suggest you first think carefully about whether
this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the
recipients all the rights that we gave
you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without
limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's

complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based

on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or

linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable

source code for the Library including whatever
changes were used in the work (which must be distributed under
Sections 1 and 2 above); and, if the work is an executable linked
with the Library, with the complete machine-readable "work that
uses the Library", as object code and/or source code, so that the
user can modify the Library and then relink to produce a modified
executable containing the modified Library. (It is understood
that the user who changes the contents of definitions files in the
Library will not necessarily be able to recompile the application
to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the
Library. A suitable mechanism is one that (1) uses at run time a
copy of the library already present on the user's computer system,
rather than copying library functions into the executable, and (2)
will operate properly with a modified version of the library, if
the
user installs one, as long as the modified version is
interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at
least three years, to give the same user the materials
specified in Subsection 6a, above, for a charge no more
than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy
from a designated place, offer equivalent access to copy the above
specified materials from the same place.

e) Verify that the user has already received a copy of these
materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it. However, as a special exception,
the materials to be distributed need not include anything that is
normally distributed (in either source or binary form) with
the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system. Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot

distribute
so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all. For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system which is
implemented by public license practices. Many
people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

13. The Free Software Foundation may publish revised and/or new
versions of the Lesser General Public
License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by

the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL
DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively

convey the exclusion of warranty; and each file should have at least the
"copyright" line
and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You
should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization
obtaining a copy of the software and accompanying documentation covered by
this license (the "Software") to use, reproduce, display, distribute,
execute, and transmit the Software, and to prepare derivative works of the
Software, and to permit third-parties to whom the Software is furnished to
do so, all subject to the following:

The copyright notices in the Software and this entire statement, including
the above license grant, this restriction and the following disclaimer,
must be included in all copies of the Software, in whole or in part, and
all derivative works of the Software, unless such copies or derivative

works are solely in the form of machine-executable object code generated by
a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT
SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a

copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a

cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with

the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability

incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Copyright (c) 2011 University of Illinois at Urbana-Champaign. All rights reserved.

Developed by: Polaris Research Group
University of Illinois at Urbana-Champaign
http://polaris.cs.uiuc.edu

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal with the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

1. Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimers.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimers in the
documentation and/or other materials provided with the distribution.
3. Neither the names of Polaris Research Group, University of Illinois at
Urbana-Champaign, nor the names of its contributors may be used to endorse

or promote products derived from this Software without specific prior
written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE SOFTWARE.
GCC RUNTIME LIBRARY EXCEPTION

Version 3.1, 31 March 2009

Copyright (C) 2009 Free Software Foundation, Inc. <http://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies of this
license document, but changing it is not allowed.

This GCC Runtime Library Exception ("Exception") is an additional
permission under section 7 of the GNU General Public License, version
3 ("GPLv3"). It applies to a given file (the "Runtime Library") that
bears a notice placed by the copyright holder of the file stating that
the file is governed by GPLv3 along with this Exception.

When you use GCC to compile a program, GCC may combine portions of
certain GCC header files and runtime libraries with the compiled
program. The purpose of this Exception is to allow compilation of
non-GPL (including proprietary) programs to use, in this way, the
header files and runtime libraries covered by this Exception.

0. Definitions.

A file is an "Independent Module" if it either requires the Runtime
Library
for execution after a Compilation Process, or makes use of an
interface provided by the Runtime Library, but is not otherwise based
on the Runtime Library.

"GCC" means a version of the GNU Compiler Collection, with or without
modifications, governed by version 3 (or a specified later version) of
the GNU General Public License (GPL) with the option of using any
subsequent versions published by the FSF.

"GPL-compatible Software" is software whose conditions of propagation,
modification and use would permit combination with GCC in accord with
the license of GCC.

"Target Code" refers to output from any compiler for a real or virtual target processor architecture, in executable form or suitable for input to an assembler, loader, linker and/or execution phase. Notwithstanding that, Target Code does not include data in any format that is used as a compiler intermediate representation, or used for producing a compiler intermediate representation.

The "Compilation Process" transforms code entirely represented in non-intermediate languages designed for human-written code, and/or in Java Virtual Machine byte code, into Target Code. Thus, for example, use of source code generators and preprocessors need not be considered part of the Compilation Process, since the Compilation Process can be understood as starting with the output of the generators or preprocessors.

A Compilation Process is "Eligible" if it is done using GCC, alone or with other GPL-compatible software, or if it is done without using any work based on GCC. For example, using non-GPL-compatible Software to optimize any GCC intermediate representations would not qualify as an Eligible Compilation Process.

1. Grant of Additional Permission.

You have permission to propagate a work of Target Code formed by combining the Runtime Library with Independent Modules, even if such propagation would otherwise violate the terms of GPLv3, provided that all Target Code was generated by Eligible Compilation Processes. You may then convey such a combination under terms of your choice, consistent with the licensing of the Independent Modules.

2. No Weakening of GCC Copyleft.

The availability of this Exception does not imply any general presumption that third-party software is unaffected by the copyleft requirements of the license of GCC.
libffi - Copyright (c) 1996-2021 Anthony Green, Red Hat, Inc and others.
See source files for details.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the ``Software''), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED ``AS IS'', WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF
CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
GNU Free Documentation License
Version 1.2, November 2002

Copyright (C) 2000-2024 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

0. PREAMBLE

The purpose of this License is to make a manual, textbook, or other
functional and useful document "free" in the sense of freedom: to
assure everyone the effective freedom to copy and redistribute it,
with or without modifying it, either commercially or noncommercially.
Secondarily, this License preserves for the author and publisher a way
to get credit for their work, while not being considered responsible
for modifications made by others.

This License is a kind of "copyleft", which means that derivative
works of the document must themselves be free in the same sense. It
complements the GNU General Public License, which is a copyleft
license designed for free software.

We
have designed this License in order to use it for manuals for free
software, because free software needs free documentation: a free
program should come with manuals providing the same freedoms that the
software does. But this License is not limited to software manuals;
it can be used for any textual work, regardless of subject matter or
whether it is published as a printed book. We recommend this License
principally for works whose purpose is instruction or reference.

1. APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that contains a notice placed by the copyright holder saying it can be distributed under the terms of this License. Such a notice grants a world-wide, royalty-free license, unlimited in duration, to use that work under the conditions stated herein. The "Document", below, refers to any such manual or work. Any member of the public is a licensee, and is addressed as "you". You accept the license if you copy, modify
or distribute the work in a way requiring permission
under copyright law.

A "Modified Version" of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A "Secondary Section" is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject (or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics.) The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political position regarding them.

The "Invariant Sections" are certain Secondary Sections whose titles are designated, as being those of Invariant Sections, in the
notice
that says that the Document is released under this License. If a section does not fit the above definition of Secondary then it is not allowed to be designated as Invariant. The Document may contain zero Invariant Sections. If the Document does not identify any Invariant Sections then there are none.

The "Cover Texts" are certain short passages of text that are listed, as Front-Cover Texts or Back-Cover Texts, in the notice that says that the Document is released under this License. A Front-Cover Text may be at most 5 words, and a Back-Cover Text may be at most 25 words.

A "Transparent" copy of the Document means a machine-readable copy, represented in a format whose specification is available to the general public, that is suitable for revising the document straightforwardly with generic text editors or (for images composed of pixels) generic paint programs or (for drawings) some widely available drawing editor, and that is suitable for input to text formatters or for

automatic translation to a variety of formats suitable for input to text formatters. A copy made in an otherwise Transparent file format whose markup, or absence of markup, has been arranged to thwart or discourage subsequent modification by readers is not Transparent. An image format is not Transparent if used for any substantial amount of text. A copy that is not "Transparent" is called "Opaque".

Examples of suitable formats for Transparent copies include plain ASCII without markup, Texinfo input format, LaTeX input format, SGML or XML using a publicly available DTD, and standard-conforming simple HTML, PostScript or PDF designed for human modification. Examples of transparent image formats include PNG, XCF and JPG. Opaque formats include proprietary formats that can be read and edited only by proprietary word processors, SGML or XML for which the DTD and/or processing tools are not generally available, and the machine-generated HTML, PostScript or PDF produced by some word processors for output purposes only.

The "Title Page" means, for a printed book, the title page itself, plus such following pages as are needed to hold, legibly, the material this License requires to appear in the title page. For works in formats which do not have any title page as such, "Title Page" means the text near the most prominent appearance of the work's title, preceding the beginning of the body of the text.

A section "Entitled XYZ" means a named subunit of the Document whose title either is precisely XYZ or contains XYZ in parentheses following text that translates XYZ in another language. (Here XYZ stands for a specific section name mentioned below, such as "Acknowledgements", "Dedications", "Endorsements", or "History".) To "Preserve the Title" of such a section when you modify the Document means that it remains a section "Entitled XYZ" according to this definition.

The Document may include Warranty Disclaimers next to the notice which states that this License applies to the Document. These Warranty Disclaimers are considered to be included by reference in this License, but only as regards disclaiming warranties: any other implication that these Warranty Disclaimers may have is void and has no effect on the meaning of this License.

2. VERBATIM COPYING

You may copy and distribute the Document in any medium, either commercially or noncommercially, provided that this License, the copyright notices, and the license notice saying this License applies

to the Document are reproduced in all copies, and that you add no other conditions whatsoever to those of this License. You may not use technical measures to obstruct or control the reading or further copying of the copies you make or distribute. However, you may accept compensation in exchange for copies. If you distribute a large enough number of copies you must also follow the conditions in section 3.

You may also lend copies, under the same conditions stated above, and you may publicly display copies.

3.
COPYING IN QUANTITY

If you publish printed copies (or copies in media that commonly have printed covers) of the Document, numbering more than 100, and the Document's license notice requires Cover Texts, you must enclose the copies in covers that carry, clearly and legibly, all these Cover Texts: Front-Cover Texts on the front cover, and Back-Cover Texts on the back cover. Both covers must also clearly and legibly identify you as the publisher of these copies. The front cover must present the full title with all words of the title equally prominent and visible. You may add other material on the covers in addition. Copying with changes limited to the covers, as long as they preserve the title of the Document and satisfy these conditions, can be treated as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit legibly, you should put the first ones listed (as many as fit reasonably) on the actual cover, and continue the rest onto adjacent
pages.

If you publish or distribute Opaque copies of the Document numbering more than 100, you must either include a machine-readable Transparent copy along with each Opaque copy, or state in or with each Opaque copy a computer-network location from which the general network-using public has access to download using public-standard network protocols a complete Transparent copy of the Document, free of added material. If you use the latter option, you must take reasonably prudent steps, when you begin distribution of Opaque copies in quantity, to ensure that this Transparent copy will remain thus accessible at the stated location until at least one year after the last time you distribute an Opaque copy (directly or through your agents or retailers) of that edition to the public.

It is requested, but not required, that you contact the authors of the Document well before redistributing any large number of copies, to give

them a chance to provide you with an updated version of
the Document.

4. MODIFICATIONS

You may copy and distribute a Modified Version of the Document under
the conditions of sections 2 and 3 above, provided that you release
the Modified Version under precisely this License, with the Modified
Version filling the role of the Document, thus licensing distribution
and modification of the Modified Version to whoever possesses a copy
of it. In addition, you must do these things in the Modified Version:

A. Use in the Title Page (and on the covers, if any) a title distinct
from that of the Document, and from those of previous versions
(which should, if there were any, be listed in the History section
of the Document). You may use the same title as a previous version
if the original publisher of that version gives permission.
B. List on the Title Page, as authors, one or more persons or entities
responsible for authorship of the modifications in the Modified
Version, together with at least five of the principal authors of the
Document (all of its principal authors, if it has fewer than five),
unless they release you from this requirement.
C. State on the Title page the name of the publisher of the
Modified Version, as the publisher.
D. Preserve all the copyright notices of the Document.
E. Add an appropriate copyright notice for your modifications
adjacent to the other copyright notices.
F. Include, immediately after the copyright notices, a license notice
giving the public permission to use the Modified Version under the
terms of this License, in the form shown in the Addendum below.
G. Preserve in that license notice the full lists of Invariant Sections
and required Cover Texts given in the Document's license notice.
H. Include an unaltered copy of this License.
I. Preserve the section Entitled "History", Preserve its Title, and add
to it an item stating at least the title, year, new authors, and
publisher of the Modified Version as given on the Title Page. If
there is no section
Entitled "History" in the Document, create one
stating the title, year, authors, and publisher of the Document as
given on its Title Page, then add an item describing the Modified
Version as stated in the previous sentence.
J. Preserve the network location, if any, given in the Document for
public access to a Transparent copy of the Document, and likewise
the network locations given in the Document for previous versions
it was based on. These may be placed in the "History" section.
You may omit a network location for a work that was published at
least four years before the Document itself, or if the original

publisher of the version it refers to gives permission.
K. For any section Entitled "Acknowledgements" or "Dedications",
Preserve the Title of the section, and preserve in the section all
the substance and tone of each of the contributor acknowledgements
and/or dedications given therein.
L. Preserve all the Invariant Sections of the Document,
unaltered in their text and in their titles. Section numbers
or the equivalent are not considered part of the section titles.
M. Delete any section Entitled "Endorsements". Such a section
may not be included in the Modified Version.
N. Do not retitle any existing section to be Entitled "Endorsements"
or to conflict in title with any Invariant Section.
O. Preserve any Warranty Disclaimers.

If the Modified Version includes new front-matter sections or
appendices that qualify as Secondary Sections and contain no material
copied from the Document, you may at your option designate some or all
of these sections as invariant. To do this, add their titles to the
list of Invariant Sections in the Modified Version's license notice.
These titles must be distinct from any other section titles.

You may add a section Entitled "Endorsements", provided it contains
nothing but endorsements of your Modified Version by various
parties--for example, statements of peer review or that
the text has
been approved by an organization as the authoritative definition of a
standard.

You may add a passage of up to five words as a Front-Cover Text, and a
passage of up to 25 words as a Back-Cover Text, to the end of the list
of Cover Texts in the Modified Version. Only one passage of
Front-Cover Text and one of Back-Cover Text may be added by (or
through arrangements made by) any one entity. If the Document already
includes a cover text for the same cover, previously added by you or
by arrangement made by the same entity you are acting on behalf of,
you may not add another; but you may replace the old one, on explicit
permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License
give permission to use their names for publicity for or to assert or
imply endorsement of any Modified Version.

5. COMBINING DOCUMENTS

You may combine the Document with other documents released under this
License, under the

terms defined in section 4 above for modified
versions, provided that you include in the combination all of the
Invariant Sections of all of the original documents, unmodified, and
list them all as Invariant Sections of your combined work in its
license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and
multiple identical Invariant Sections may be replaced with a single
copy. If there are multiple Invariant Sections with the same name but
different contents, make the title of each such section unique by
adding at the end of it, in parentheses, the name of the original
author or publisher of that section if known, or else a unique number.
Make the same adjustment to the section titles in the list of
Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections Entitled "History"
in the various original documents, forming one section Entitled
"History"; likewise
combine any sections Entitled "Acknowledgements",
and any sections Entitled "Dedications". You must delete all sections
Entitled "Endorsements".

6. COLLECTIONS OF DOCUMENTS

You may make a collection consisting of the Document and other documents
released under this License, and replace the individual copies of this
License in the various documents with a single copy that is included in
the collection, provided that you follow the rules of this License for
verbatim copying of each of the documents in all other respects.

You may extract a single document from such a collection, and distribute
it individually under this License, provided you insert a copy of this
License into the extracted document, and follow this License in all
other respects regarding verbatim copying of that document.

7. AGGREGATION WITH INDEPENDENT WORKS

A compilation of the Document or its derivatives with other separate
and independent documents or works, in or on a volume of a storage or
distribution medium,
is called an "aggregate" if the copyright
resulting from the compilation is not used to limit the legal rights
of the compilation's users beyond what the individual works permit.
When the Document is included in an aggregate, this License does not
apply to the other works in the aggregate which are not themselves
derivative works of the Document.

If the Cover Text requirement of section 3 is applicable to these copies of the Document, then if the Document is less than one half of the entire aggregate, the Document's Cover Texts may be placed on covers that bracket the Document within the aggregate, or the electronic equivalent of covers if the Document is in electronic form. Otherwise they must appear on printed covers that bracket the whole aggregate.

8. TRANSLATION

Translation is considered a kind of modification, so you may distribute translations of the Document under the terms of section 4. Replacing Invariant Sections with translations requires special permission from
their copyright holders, but you may include
translations of some or all Invariant Sections in addition to the original versions of these Invariant Sections. You may include a translation of this License, and all the license notices in the Document, and any Warranty Disclaimers, provided that you also include the original English version of this License and the original versions of those notices and disclaimers. In case of a disagreement between the translation and the original version of this License or a notice or disclaimer, the original version will prevail.

If a section in the Document is Entitled "Acknowledgements", "Dedications", or "History", the requirement (section 4) to Preserve its Title (section 1) will typically require changing the actual title.

9. TERMINATION

You may not copy, modify, sublicense, or distribute the Document except as expressly provided for under this License. Any other attempt to copy, modify, sublicense or distribute the Document is void, and will automatically
terminate your rights under this License. However,
parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

10. FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions of the GNU Free Documentation License from time to time. Such new

versions will be similar in spirit to the present version, but may
differ in detail to address new problems or concerns. See
http://www.gnu.org/copyleft/.

Each version of the License is given a distinguishing version number.
If the Document specifies that a particular numbered version of this
License "or any later version" applies to it, you have the option of
following the terms and conditions either of that specified version or
of any later version that has been published (not as a draft) by the
Free Software Foundation. If the Document does not specify a version
number of this License,
 you may choose any version ever published (not
as a draft) by the Free Software Foundation.

ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of
the License in the document and put the following copyright and
license notices just after the title page:

  Copyright (c) YEAR YOUR NAME.
  Permission is granted to copy, distribute and/or modify this document
  under the terms of the GNU Free Documentation License, Version 1.2
  or any later version published by the Free Software Foundation;
  with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts.
  A copy of the license is included in the section entitled "GNU
  Free Documentation License".

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts,
replace the "with...Texts." line with this:

  with the Invariant Sections being LIST THEIR TITLES, with the
  Front-Cover Texts being LIST, and with the Back-Cover Texts
 being LIST.

If you have Invariant Sections without Cover Texts, or some other
combination of the three, merge those two alternatives to suit the
situation.

If your document contains nontrivial examples of program code, we
recommend releasing these examples in parallel under your choice of
free software license, such as the GNU General Public License,
to permit their use in free software.
This source code was written by the Go contributors.
The master list of contributors is in the main Go distribution,
visible at http://tip.golang.org/CONTRIBUTORS.

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
                GNU GENERAL PUBLIC LICENSE
                 Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

                      Preamble

 The GNU General Public License is a free, copyleft license for
software and other kinds of works.

 The licenses for most software and other practical works are designed
to take away your freedom to share and change the works. By contrast,
the GNU General Public License is intended to guarantee your freedom to
share and change all versions of a program--to make sure it remains free
software for all its users. We, the Free Software Foundation, use the
GNU General Public License for most of our software; it applies also to
any other work released this way by its authors. You can apply it to
your programs, too.

When we speak of free software, we are referring to
freedom, not
price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps:
(1)
assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we
stand
ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that

patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The
"System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally
available free
programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated

conditions are met. This License explicitly affirms your unlimited
permission to run the unmodified Program. The output from running a
covered work is covered
by this License only if the output, given its
content, constitutes a covered work. This License acknowledges your
rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not
convey, without conditions so long as your license otherwise remains
in force. You may convey covered works to others for the sole purpose
of having them make modifications exclusively for you, or provide you
with facilities for running those works, provided that you comply with
the terms of this License in conveying all material for which you do
not control copyright. Those thus making or running the covered works
for you must do so exclusively on your behalf, under your direction
and control, on terms that prohibit them from making any copies of
your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under
the conditions stated below. Sublicensing is not allowed;
section 10
makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological
measure under any applicable law fulfilling obligations under article
11 of the WIPO copyright treaty adopted on 20 December 1996, or
similar laws prohibiting or restricting circumvention of such
measures.

When you convey a covered work, you waive any legal power to forbid
circumvention of technological measures to the extent such circumvention
is effected by exercising rights under this License with respect to
the covered work, and you disclaim any intention to limit operation or
modification of the work as a means of enforcing, against the work's
users, your or third parties' legal rights to forbid circumvention of
technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you
receive it, in any medium, provided that you conspicuously and
appropriately
publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any
non-permissive terms added in accord with section 7 apply to the code;
keep intact all notices of the absence of any warranty; and give all

recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the

machine-readable Corresponding Source under the terms of this License,
in one of these ways:

a) Convey the object code in, or embodied in, a physical product
(including a physical distribution medium), accompanied by the
Corresponding Source fixed on a durable physical medium
customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product
(including a physical distribution medium), accompanied by a
written offer, valid for at least three years
and valid for as
long as you offer spare parts or customer support for that product
model, to give anyone who possesses the object code either (1) a
copy of the Corresponding Source for all the software in the
product that is covered by this License, on a durable physical
medium customarily used for software interchange, for a price no
more than your reasonable cost of physically performing this
conveying of source, or (2) access to copy the
Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the
written offer to provide the Corresponding Source. This
alternative is allowed only occasionally and noncommercially, and
only if you received the object code with such an offer, in accord
with subsection 6b.

d) Convey the object code by offering access from a designated
place (gratis or for a charge), and offer equivalent access to the
Corresponding Source in
the same way through the same place at no
further charge. You need not require recipients to copy the
Corresponding Source along with the object code. If the place to
copy the object code is a network server, the Corresponding Source
may be on a different server (operated by you or a third party)
that supports equivalent copying facilities, provided you maintain
clear directions next to the object code saying where to find the
Corresponding Source. Regardless of what server hosts the
Corresponding Source, you remain obligated to ensure that it is
available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided
you inform other peers where the object code and Corresponding
Source of the work are being offered to the general public at no
charge under subsection 6d.

A separable portion of the object code, whose source code is excluded
from the Corresponding Source

as a System Library, need not be
included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any
tangible personal property which is normally used for personal, family,
or household purposes, or (2) anything designed or sold for incorporation
into a dwelling. In determining whether a product is a consumer product,
doubtful cases shall be resolved in favor of coverage. For a particular
product received by a particular user, "normally used" refers to a
typical or common use of that class of product, regardless of the status
of the particular user or of the way in which the particular user
actually uses, or expects or is expected to use, the product. A product
is a consumer product regardless of whether the product has substantial
commercial, industrial or non-consumer uses, unless such uses represent
the only significant mode of use of the product.

"Installation Information" for a User Product means any methods,
procedures, authorization
keys, or other information required to install
and execute modified versions of a covered work in that User Product from
a modified version of its Corresponding Source. The information must
suffice to ensure that the continued functioning of the modified object
code is in no case prevented or interfered with solely because
modification has been made.

If you convey an object code work under this section in, or with, or
specifically for use in, a User Product, and the conveying occurs as
part of a transaction in which the right of possession and use of the
User Product is transferred to the recipient in perpetuity or for a
fixed term (regardless of how the transaction is characterized), the
Corresponding Source conveyed under this section must be accompanied
by the Installation Information. But this requirement does not apply
if neither you nor any third party retains the ability to install
modified object code on the User Product (for example, the work has
been installed in
ROM).

The requirement to provide Installation Information does not include a
requirement to continue to provide support service, warranty, or updates
for a work that has been modified or installed by the recipient, or for
the User Product in which it has been modified or installed. Access to a
network may be denied when the modification itself materially and
adversely affects the operation of the network or violates the rules and
protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided,
in accord with this section must be in a format that is publicly
documented (and with an implementation available to the public in

source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or authors of the material; or

e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above
requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright
holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under

this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within

the scope of its coverage, prohibits the exercise of, or is
conditioned on the non-exercise of one or more of the rights that are
specifically granted under this License. You may not convey a covered
work if you are a party to an arrangement with a third party that is
in the business of distributing software, under which you make payment
to the third party based on the extent of your activity of conveying
the work, and under which the third party grants, to any of the
parties who would receive the covered work from you, a discriminatory
patent license (a) in connection with copies of the covered work
conveyed by you (or copies made from those copies), or (b) primarily
for and in connection with specific products or compilations that
contain the covered work, unless you entered into that arrangement,
or
that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting
any implied license or other defenses to infringement that may
otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot convey a
covered work so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you may
not convey it at all. For example, if you agree to terms that obligate you
to collect a royalty for further conveying from those to whom you convey
the Program, the only way you could satisfy both those terms and this
License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have
permission to link or combine any covered work with a work licensed
under version 3 of the GNU Affero General Public License into a single
combined work, and to convey the resulting work. The terms of this
License will continue to apply to the part which is the covered work,
but the special requirements of the GNU Affero General Public License,
section 13, concerning interaction through a network will apply to the
combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of
the GNU General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided
above cannot be given local legal effect according to their terms,
reviewing courts shall apply local law that most closely approximates
an absolute waiver of all civil liability in connection with the
Program, unless a warranty or assumption of liability accompanies a
copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
state the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where
the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <http://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

 You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<http://www.gnu.org/licenses/>.

 The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want to
 do, use the GNU Lesser General
Public License instead of this License. But first, please read
<http://www.gnu.org/philosophy/why-not-lgpl.html>.
The files gnupng and gnu.eps are part of GNU Modula-2.

Copyright (C) 2005-2024 Free Software Foundation, Inc.

This file is part of GNU Modula-2.

GNU Modula-2 is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 3, or (at your option)
any later version.

GNU Modula-2 is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with GNU Modula-2; see the file COPYING. If not, write to the
Free Software Foundation, 51 Franklin Street, Fifth Floor, Boston, MA
02110-1301, USA. */
    GNU LESSER GENERAL PUBLIC LICENSE
                Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

 This version of the GNU Lesser General Public License incorporates
the terms and conditions of version 3 of the GNU General Public
License, supplemented by the additional permissions listed below.

0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser General Public License, and the "GNU GPL" refers to version 3 of the GNU General Public License.

"The Library" refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library.

A "Combined Work" is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the "Linked Version".

The "Minimal Corresponding Source" for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The "Corresponding Application Code" for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

2. Conveying Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or

b) under the GNU GPL, with none of the additional permissions of
this License applicable to that copy.

3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from
a header file that is part of the Library. You may convey such object
code under terms of your choice, provided that, if the incorporated
material is not limited to numerical parameters, data
structure
layouts and accessors, or small macros, inline functions and templates
(ten or fewer lines in length), you do both of the following:

a) Give prominent notice with each copy of the object code that the
Library is used in it and that the Library and its use are
covered by this License.

b) Accompany the object code with a copy of the GNU GPL and this license
document.

4. Combined Works.

You may convey a Combined Work under terms of your choice that,
taken together, effectively do not restrict modification of the
portions of the Library contained in the Combined Work and reverse
engineering for debugging such modifications, if you also do each of
the following:

a) Give prominent notice with each copy of the Combined Work that
the Library is used in it and that the Library and its use are
covered by this License.

b) Accompany the Combined Work with a copy of the GNU GPL and this license
document.

c) For a Combined Work that displays copyright
notices during
execution, include the copyright notice for the Library among
these notices, as well as a reference directing the user to the
copies of the GNU GPL and this license document.

d) Do one of the following:

0) Convey the Minimal Corresponding Source under the terms of this
License, and the Corresponding Application Code in a form
suitable for, and under terms that permit, the user to
recombine or relink the Application with a modified version of

the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.

1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.

e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.

b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the
Library as you received it specifies that a certain numbered version
of the GNU Lesser General Public License "or any later version"
applies to it, you have the option of following
the terms and
conditions either of that published version or of any later version
published by the Free Software Foundation. If the Library as you
received it does not specify a version number of the GNU Lesser
General Public License, you may choose any version of the GNU Lesser
General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide
whether future versions of the GNU Lesser General Public License shall
apply, that proxy's public statement of acceptance of any version is
permanent authorization for you to choose that version for the
Library.
GCC RUNTIME LIBRARY EXCEPTION

Version 3.1, 31 March 2009

Copyright (C) 2009-2024 Free Software Foundation, Inc. <http://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies of this
license document, but changing it is not allowed.

This GCC Runtime Library Exception ("Exception") is an additional
permission under section 7 of the GNU General Public License, version
3 ("GPLv3"). It applies to a given file (the "Runtime Library") that
bears a notice placed by the copyright holder of the file stating that
the file is governed by GPLv3 along with this Exception.

When you use GCC to compile a program, GCC may combine portions of
certain GCC header files and runtime libraries with the compiled
program. The purpose of this Exception is to allow compilation of
non-GPL (including proprietary) programs to use, in this way, the
header files and runtime libraries covered by this Exception.

0. Definitions.

A file is an "Independent Module" if it either requires the Runtime
Library
for execution after a Compilation Process, or makes use of an
interface provided by the Runtime Library, but is not otherwise based
on the Runtime Library.

"GCC" means a version of the GNU Compiler Collection, with or without
modifications, governed by version 3 (or a specified later version) of
the GNU General Public License (GPL) with the option of using any

subsequent versions published by the FSF.

"GPL-compatible Software" is software whose conditions of propagation, modification and use would permit combination with GCC in accord with the license of GCC.

"Target Code" refers to output from any compiler for a real or virtual target processor architecture, in executable form or suitable for input to an assembler, loader, linker and/or execution phase. Notwithstanding that, Target Code does not include data in any format that is used as a compiler intermediate representation, or used for producing a compiler intermediate representation.

The "Compilation Process" transforms code entirely represented in non-intermediate languages designed for human-written code, and/or in Java Virtual Machine byte code, into Target Code. Thus, for example, use of source code generators and preprocessors need not be considered part of the Compilation Process, since the Compilation Process can be understood as starting with the output of the generators or preprocessors.

A Compilation Process is "Eligible" if it is done using GCC, alone or with other GPL-compatible software, or if it is done without using any work based on GCC. For example, using non-GPL-compatible Software to optimize any GCC intermediate representations would not qualify as an Eligible Compilation Process.

1. Grant of Additional Permission.

You have permission to propagate a work of Target Code formed by combining the Runtime Library with Independent Modules, even if such propagation would otherwise violate the terms of GPLv3, provided that all Target Code was generated by Eligible Compilation Processes. You may then convey such a combination under terms of your choice, consistent with the licensing of the Independent Modules.

2. No Weakening of GCC Copyleft.

The availability of this Exception does not imply any general presumption that third-party software is unaffected by the copyleft requirements of the license of GCC.

==========

compiler_rt License

==========

The compiler_rt library is dual licensed under both the University of Illinois

"BSD-Like" license and the MIT license. As a user of this code you may choose
to use it under either license. As a contributor, you agree to allow your code
to be used under both.

Full text of the relevant licenses is included below.

==

University of Illinois/NCSA
Open Source License

Copyright (c) 2009-2012 by the contributors listed in CREDITS.TXT

All rights reserved.

Developed by:

  LLVM Team

  University of Illinois at Urbana-Champaign

  http://llvm.org

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal with
the Software without restriction,
 including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

  * Redistributions of source code must retain the above copyright notice,
    this list of conditions and the following disclaimers.

  * Redistributions in binary form must reproduce the above copyright notice,
    this list of conditions and the following disclaimers in the
    documentation and/or other materials provided with the distribution.

  * Neither the names of the LLVM Team, University of Illinois at
    Urbana-Champaign, nor the names of its contributors may be used to
    endorse or promote products derived from this Software without specific
    prior written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
 FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER

LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE SOFTWARE.

==

Copyright (c) 2009-2012 by the contributors listed in CREDITS.TXT

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or
 substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

==

Copyrights and Licenses for Third Party Software Distributed with LLVM:

==

The LLVM software contains code written by third parties. Such software will
have its own individual LICENSE.TXT file in the directory in which it appears.
This file will describe the copyrights, license, and restrictions which apply
to that code.

The disclaimer of
 warranty in the University of Illinois Open Source License
applies to all code in the LLVM Distribution, and nothing in any of the
other licenses gives permission to use the names of the LLVM Team or the
University of Illinois to endorse or promote products derived from this
Software.

The following pieces of software have additional or alternate copyrights,
licenses, and/or restrictions:

Program	Directory
mach_override	lib/interception/mach_override

UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

Unicode Data Files include all data files under the directories http://www.unicode.org/Public/, http://www.unicode.org/reports/, and http://www.unicode.org/cldr/data/. Unicode Data Files do not include PDF online code charts under the directory http://www.unicode.org/Public/. Software includes any source code published in the Unicode Standard or under the directories http://www.unicode.org/Public/, http://www.unicode.org/reports/, and http://www.unicode.org/cldr/data/.

NOTICE TO USER: Carefully read the following legal agreement. BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"), YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright 1991-2013 Unicode, Inc. All rights reserved. Distributed under the Terms of Use in http://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining a copy of the Unicode data files and any associated documentation (the "Data Files") or Unicode software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that (a) the above copyright notice(s) and this permission notice appear with all copies of the Data Files or Software, (b) both the above copyright notice(s) and this permission notice appear in associated documentation, and (c) there is clear notice in each modified Data File or in the Software as well as in the documentation associated with the Data File(s) or Software that the data or software has been modified.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.
Copyright (c) 2019 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.90 musl-dev 1.2.5-r9

1.90.1 Available under license :

musl as a whole is licensed under the following standard MIT license:

Copyright 2005-2020 Rich Felker, et al.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to

the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Authors/contributors include:

A. Wilcox
Ada Worcester
Alex Dowad
Alex Suykov
Alexander Monakov
Andre McCurdy
Andrew Kelley
Anthony G. Basile
Aric Belsito
Arvid Picciani
Bartosz Brachaczek
Benjamin Peterson
Bobby Bingham
Boris Brezillon
Brent Cook
Chris Spiegel
Clment Vasseur
Daniel Micay
Daniel Sabogal
Daurnimator
David Carlier
David Edelsohn
Denys Vlasenko
Dmitry Ivanov
Dmitry V. Levin
Drew DeVault
Emil Renner Berthing
Fangrui Song
Felix Fietkau
Felix Janda
Gianluca Anzolin

Hauke Mehrtens
He X
Hiltjo Posthuma
Isaac Dunham
Jaydeep Patil
Jens Gustedt
Jeremy Huntwork
Jo-Philipp Wich
Joakim Sindholt
John Spencer
Julien Ramseier
Justin Cormack
Kaarle Ritvanen
Khem Raj
Kylie McClain
Leah Neukirchen
Luca Barbato
Luka
Perkov
M Farkas-Dyck (Strake)
Mahesh Bodapati
Markus Wichmann
Masanori Ogino
Michael Clark
Michael Forney
Mikhail Kremnyov
Natanael Copa
Nicholas J. Kain
orc
Pascal Cuoq
Patrick Oppenlander
Petr Hosek
Petr Skocik
Pierre Carrier
Reini Urban
Rich Felker
Richard Pennington
Ryan Fairfax
Samuel Holland
Segev Finer
Shiz
sin
Solar Designer
Stefan Kristiansson
Stefan O'Rear
Szabolcs Nagy
Timo Ters
Trutz Behn

Valentin Ochs
Will Dietz
William Haddon
William Pitcock

Portions of this software are derived from third-party works licensed
under terms compatible with the above MIT license:

The TRE regular expression implementation (src/regex/reg* and
src/regex/tre*) is Copyright 2001-2008 Ville Laurikari and licensed
under a 2-clause BSD license (license text in the source files). The
included version has been heavily modified by Rich Felker in 2012, in
the interests of size, simplicity, and namespace cleanliness.

Much of the math library code (src/math/* and src/complex/*) is
Copyright 1993,2004
 Sun Microsystems or
Copyright 2003-2011 David Schultz or
Copyright 2003-2009 Steven G. Kargl or
Copyright 2003-2009 Bruce D. Evans or
Copyright 2008 Stephen L. Moshier or
Copyright 2017-2018 Arm Limited
and labelled as such in comments in the individual source files. All
have been licensed under extremely permissive terms.

The ARM memcpy code (src/string/arm/memcpy.S) is Copyright 2008
The Android Open Source Project and is licensed under a two-clause BSD
license. It was taken from Bionic libc, used on Android.

The AArch64 memcpy and memset code (src/string/aarch64/*) are
Copyright 1999-2019, Arm Limited.

The implementation of DES for crypt (src/crypt/crypt_des.c) is
Copyright 1994 David Burren. It is licensed under a BSD license.

The implementation of blowfish crypt (src/crypt/crypt_blowfish.c) was
originally written by Solar Designer and placed into the public
domain. The code also comes with a fallback permissive license for use
in jurisdictions that may not recognize the
 public domain.

The smoothsort implementation (src/stdlib/qsort.c) is Copyright 2011
Valentin Ochs and is licensed under an MIT-style license.

The x86_64 port was written by Nicholas J. Kain and is licensed under
the standard MIT terms.

The mips and microblaze ports were originally written by Richard

Pennington for use in the ellcc project. The original code was adapted by Rich Felker for build system and code conventions during upstream integration. It is licensed under the standard MIT terms.

The mips64 port was contributed by Imagination Technologies and is licensed under the standard MIT terms.

The powerpc port was also originally written by Richard Pennington, and later supplemented and integrated by John Spencer. It is licensed under the standard MIT terms.

All other files which have no copyright comments are original works produced specifically for use as part of this library, written either by Rich Felker, the main author of the library, or by one or more contibutors listed
above. Details on authorship of individual files
can be found in the git version control history of the project. The omission of copyright and license comments in each file is in the interest of source tree size.

In addition, permission is hereby granted for all public header files (include/* and arch/*/bits/*) and crt files intended to be linked into applications (crt/*, ldso/dlstart.c, and arch/*/crt_arch.h) to omit the copyright notice and permission notice otherwise required by the license, and to use these files without any requirement of attribution. These files include substantial contributions from:

Bobby Bingham
John Spencer
Nicholas J. Kain
Rich Felker
Richard Pennington
Stefan Kristiansson
Szabolcs Nagy

all of whom have explicitly granted such permission.

This file previously contained text expressing a belief that most of the files covered by the above exception were sufficiently trivial not to be subject to copyright, resulting in confusion over whether it negated
the permissions granted in the license. In the spirit of permissive licensing, and of not having licensing issues being an obstacle to adoption, that text has been removed.

1.91 golang-set 2.8.0

1.91.1 Available under license :

Open Source Initiative OSI - The MIT License (MIT):Licensing

The MIT License (MIT)
Copyright (c) 2013 - 2022 Ralph Caraveo (deckarep@gmail.com)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.92 simdutf 5.6.3-r0

1.92.1 Available under license :

Copyright 2021 The simdutf authors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER

IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (C) 2007 International Characters Inc.
Licensed to the public under the Open Software License version 3.0.
Patents pending in Canada, the United States, and other countries.
International Characters is a trademark of International Characters Inc.
Commercial software licenses are also available.
Contact info@international-characters.com.
For further information see www.international-characters.com.
Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization
obtaining a copy of the software and accompanying documentation covered by
this license (the "Software") to use, reproduce, display, distribute,
execute, and transmit the Software, and to prepare derivative works of the
Software, and to permit third-parties to whom the Software is furnished to
do so, all subject to the following:

The copyright notices in the Software and this entire statement, including
the above license grant, this restriction and the following disclaimer,
must be included in all copies of the Software, in whole or in part, and
all derivative works of the Software, unless such copies or derivative
works are solely in the form of machine-executable object code generated by
a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT
SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial revisions, annotations,
elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue
tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor
hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained
within such NOTICE file, excluding those notices that
do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction,
or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE
file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or
claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "{}"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2020 The simdutf authors

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and
limitations under the License.
Daniel Kutenin

1.93 github.com/vimeo/go-magic 1.0.0

1.93.1 Available under license :

Copyright (c) 2014, Vimeo, LLC.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS
OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The views and conclusions contained in the software and documentation are those
of the authors and should not be interpreted as representing official policies,
either expressed or implied, of Vimeo, LLC.

1.94 iputils-ping 20240905-r0

1.94.1 Available under license :

arping: GPL-2.0-or-later
clockdiff: BSD-3-Clause
ping: BSD-3-Clause
tracepath: GPL-2.0-or-later

Files containing license texts are available in Documentation directory.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.
Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of

running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you

distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial distribution
and only if you
received the program in object code or executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under

any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE,
THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR
THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU
General Public License as published by
the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful,

but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this
is what you want to do, use the GNU Lesser General
Public License instead of this License.

1.95 icu-data-en 74.2-r1

1.95.1 Available under license :

COPYRIGHT AND PERMISSION NOTICE (ICU 58 and later)

Copyright 1991-2018 Unicode, Inc. All rights reserved.

Distributed under the Terms of Use in http://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining
a copy of the Unicode data files and any associated documentation
(the "Data Files") or Unicode software and any associated documentation
(the "Software") to deal in the Data Files or Software
without restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, and/or sell copies of
the Data Files or Software, and to permit persons to whom the Data Files
or Software are furnished to do so, provided that either
(a) this copyright and permission notice appear with all copies
of the Data Files or Software, or
(b) this copyright and permission notice appear in associated
Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF
ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT
NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT OF THIRD PARTY RIGHTS.
IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS
NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL
DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale,
use or other dealings in these Data Files or Software without prior
written authorization of the copyright holder.

Third-Party Software Licenses

This section contains third-party software notices and/or additional
terms for licensed third-party software components included within ICU
libraries.

1. ICU License - ICU 1.8.1 to ICU
57.1

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others
All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, and/or sell copies of the Software, and to permit persons
to whom the Software is furnished to do so, provided that the above
copyright notice(s) and this permission notice appear in all copies of
the Software and that both the above copyright notice(s) and this
permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT
OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER
OR
HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY
SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER
RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF
CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale, use
or other dealings in this Software without prior written authorization
of the copyright holder.

All trademarks and registered trademarks mentioned herein are the
property of their respective owners.

2. Chinese/Japanese Word Break Dictionary Data (cjdict.txt)

```
#     The Google Chrome software developed by Google is licensed under
# the BSD license. Other software included in this distribution is
# provided under other licenses, as set forth below.
#
#  The BSD License
#  http://opensource.org/licenses/bsd-license.php
#  Copyright (C) 2006-2008, Google Inc.
#
#  All rights reserved.
#
#  Redistribution and use in source and binary forms, with or without
# modification, are permitted provided that the following conditions are met:
#
#  Redistributions of source code must retain the above copyright notice,
# this list of conditions and the following disclaimer.
#  Redistributions in binary form must reproduce the above
# copyright notice, this list of conditions and the following
```

disclaimer in the documentation and/or other materials provided with
the distribution.
Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.
#
#
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR
 PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
#
#
The word list in cjdict.txt are generated by combining three word lists
listed below with further processing for compound word breaking. The
frequency is generated with an iterative training against Google web
corpora.
#
* Libtabe (Chinese)
- https://sourceforge.net/project/?group_id=1519
- Its license terms and conditions are shown below.
#
* IPADIC (Japanese)
- http://chasen.aist-nara.ac.jp/chasen/distribution.html
 #   - Its license terms and conditions are shown below.
#
---------COPYING.libtabe ---- BEGIN--------------------
#
/*
* Copyright (c) 1999 TaBE Project.
* Copyright (c) 1999 Pai-Hsiang Hsiao.
* All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
*
* . Redistributions of source code must retain the above copyright
*   notice, this list of conditions and the following disclaimer.

```
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the TaBE Project nor the names of its
#   *   contributors may be used to endorse or promote products derived
#   *   from this software
 without specific prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  /*
#   * Copyright (c) 1999 Computer Systems and Communication Lab,
#   *                    Institute
 of Information Science, Academia
#      *                    Sinica. All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the Computer Systems and Communication Lab
#   *   nor the names of its contributors may be used to endorse or
#   *   promote products derived from this software without specific
#   *   prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND
 ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
```

```
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  Copyright 1996 Chih-Hao Tsai @ Beckman Institute,
#      University of Illinois
#  c-tsai4@uiuc.edu  http://casper.beckman.uiuc.edu/~c-tsai4
#
#  ---------------COPYING.libtabe-----END--------------------------------
#
#
#  ---------------COPYING.ipadic-----BEGIN-------------------------------
 #
#  Copyright 2000, 2001, 2002, 2003 Nara Institute of Science
#  and Technology.  All Rights Reserved.
#
#  Use, reproduction, and distribution of this software is permitted.
#  Any copy of this software, whether in its original form or modified,
#  must include both the above copyright notice and the following
#  paragraphs.
#
#  Nara Institute of Science and Technology (NAIST),
#  the copyright holders, disclaims all warranties with regard to this
#  software, including all implied warranties of merchantability and
#  fitness, in no event shall NAIST be liable for
#  any special, indirect or consequential damages or any damages
#  whatsoever resulting from loss of use, data or profits, whether in an
#  action of contract, negligence or other tortuous action, arising out
#  of or in connection with the use or performance of this software.
#
#  A large portion of the dictionary entries
#  originate from ICOT
 Free Software.  The following conditions for ICOT
#  Free Software applies to the current dictionary as well.
#
#  Each User may also freely distribute the Program, whether in its
#  original form or modified, to any third party or parties, PROVIDED
#  that the provisions of Section 3 ("NO WARRANTY") will ALWAYS appear
#  on, or be attached to, the Program, which is distributed substantially
#  in the same form as set out herein and that such intended
#  distribution, if actually made, will neither violate or otherwise
```

contravene any of the laws and regulations of the countries having
jurisdiction over the User or the intended distribution itself.
#
NO WARRANTY
#
The program was produced on an experimental basis in the course of the
research and development conducted during the project and is provided
to users as so produced on an experimental basis. Accordingly, the
program is provided without any warranty whatsoever, whether express,
implied,
statutory or otherwise. The term "warranty" used herein
includes, but is not limited to, any warranty of the quality,
performance, merchantability and fitness for a particular purpose of
the program and the nonexistence of any infringement or violation of
any right of any third party.
#
Each user of the program will agree and understand, and be deemed to
have agreed and understood, that there is no warranty whatsoever for
the program and, accordingly, the entire risk arising from or
otherwise connected with the program is assumed by the user.
#
Therefore, neither ICOT, the copyright holder, or any other
organization that participated in or was otherwise related to the
development of the program and their respective officials, directors,
officers and other employees shall be held liable for any and all
damages, including, without limitation, general, special, incidental
and consequential damages, arising out of or otherwise in
connection
with the use or inability to use the program or any product, material
or result produced or otherwise obtained by using the program,
regardless of whether they have been advised of, or otherwise had
knowledge of, the possibility of such damages at any time during the
project or thereafter. Each user will be deemed to have agreed to the
foregoing by his or her commencement of use of the program. The term
"use" as used herein includes, but is not limited to, the use,
modification, copying and distribution of the program and the
production of secondary products from the program.
#
In the case where the program, whether in its original form or
modified, was distributed or delivered to or received by a user from
any person, organization or entity other than ICOT, unless it makes or
grants independently of ICOT any specific warranty to the user in
writing, such person, organization or entity, will also be exempted
from
and not be held liable to the user for any such damages as noted
above as far as the program is concerned.
#
----------COPYING.ipadic-----END----------

3. Lao Word Break Dictionary Data (laodict.txt)

```
#  Copyright (c) 2013 International Business Machines Corporation
#  and others. All Rights Reserved.
#
# Project: http://code.google.com/p/lao-dictionary/
# Dictionary: http://lao-dictionary.googlecode.com/git/Lao-Dictionary.txt
# License: http://lao-dictionary.googlecode.com/git/Lao-Dictionary-LICENSE.txt
#             (copied below)
#
#  This file is derived from the above dictionary, with slight
#  modifications.
#  ----------------------------------------------------------------------
#  Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.
#  All rights reserved.
#
#  Redistribution and use in source and binary forms, with or without
#  modification,
#  are permitted provided that the following conditions are met:
 #
#
# Redistributions of source code must retain the above copyright notice, this
#  list of conditions and the following disclaimer. Redistributions in
#  binary form must reproduce the above copyright notice, this list of
#  conditions and the following disclaimer in the documentation and/or
#  other materials provided with the distribution.
#
#
# THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
# "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
# LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
# FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
# COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
# INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
# (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
# SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
# HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
# STRICT LIABILITY, OR
 TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
# ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
# OF THE POSSIBILITY OF SUCH DAMAGE.
#  ----------------------------------------------------------------------
```

4. Burmese Word Break Dictionary Data (burmesedict.txt)

```
#  Copyright (c) 2014 International Business Machines Corporation
#  and others. All Rights Reserved.
```

#
This list is part of a project hosted at:
github.com/kanyawtech/myanmar-karen-word-lists
#

Copyright (c) 2013, LeRoy Benjamin Sharon
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met: Redistributions of source code must retain the above
copyright notice, this list of conditions and the following
disclaimer. Redistributions in binary form must reproduce the
above copyright
 notice, this list of conditions and the following
disclaimer in the documentation and/or other materials provided
with the distribution.
#
Neither the name Myanmar Karen Word Lists, nor the names of its
contributors may be used to endorse or promote products derived
from this software without specific prior written permission.
#
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED
TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 LIABILITY, OR
TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF
THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.
---

5. Time Zone Database

 ICU uses the public domain data and code derived from Time Zone
Database for its time zone support. The ownership of the TZ database
is explained in BCP 175: Procedure for Maintaining the Time Zone
Database section 7.

7. Database Ownership
#
The TZ database itself is not an IETF Contribution or an IETF

document. Rather it is a pre-existing and regularly updated work
that is in the public domain, and is intended to remain in the
public domain. Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do
not apply to the TZ Database or contributions that individuals make
to it. Should any claims be made and substantiated against the TZ
Database, the organization that is providing
the IANA
Considerations defined in this RFC, under the memorandum of
understanding with the IETF, currently ICANN, may act in accordance
with all competent court orders. No ownership claims will be made
by ICANN or the IETF Trust on the database or the code. Any person
making a contribution to the database or code waives all rights to
future claims in that contribution or in the TZ Database.

6. Google double-conversion

Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials
provided
with the distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived
from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
UNICODE LICENSE V3

COPYRIGHT AND PERMISSION NOTICE

Copyright 2016-2024 Unicode, Inc.

NOTICE TO USER: Carefully read the following legal agreement. BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING DATA FILES, AND/OR SOFTWARE, YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.

Permission is hereby granted, free of charge, to any person obtaining a copy of data files and any associated documentation (the "Data Files") or software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that either (a) this copyright and permission notice appear with all copies of the Data Files or Software, or (b) this copyright and permission notice appear in associated Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.

SPDX-License-Identifier: Unicode-3.0

Third-Party Software Licenses

This section contains third-party software notices and/or additional terms for licensed third-party software components included within ICU libraries.

1. ICU License - ICU 1.8.1 to ICU 57.1

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others
All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, and/or sell copies of the Software, and to permit persons
to whom the Software is furnished to do so, provided that the above
copyright notice(s) and this permission notice appear in all copies of
the Software and that both the above copyright notice(s) and this
permission notice appear in supporting documentation.

THE
SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT
OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR
HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY
SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER
RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF
CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale, use
or other dealings in this Software without prior written authorization
of the copyright holder.

All trademarks and registered trademarks mentioned herein are the
property of their respective owners.

2. Time Zone Database

ICU uses the public domain data
and code derived from Time Zone
Database for its time zone support. The ownership of the TZ database
is explained in BCP 175: Procedure for Maintaining the Time Zone
Database section 7.

```
# 7.  Database Ownership
#
#    The TZ database itself is not an IETF Contribution or an IETF
#    document.  Rather it is a pre-existing and regularly updated work
#    that is in the public domain, and is intended to remain in the
```

public domain. Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do
not apply to the TZ Database or contributions that individuals make
to it. Should any claims be made and substantiated against the TZ
Database, the organization that is providing the IANA
Considerations defined in this RFC, under the memorandum of
understanding with the IETF, currently ICANN, may act in accordance
with all competent court orders. No ownership claims will be made
by ICANN or the IETF Trust on the database or the code. Any person
making
a contribution to the database or code waives all rights to
future claims in that contribution or in the TZ Database.

1.96 nghttp2 1.64.0-r0

1.96.1 Available under license :

The MIT License

Copyright (c) 2012, 2014, 2015, 2016 Tatsuhiro Tsujikawa
Copyright (c) 2012, 2014, 2015, 2016 nghttp2 contributors

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,
WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
See COPYING
Copyright Joyent, Inc. and other Node contributors.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to
deal in the Software without restriction, including without limitation the
rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
sell copies of the Software, and to permit persons to whom the Software is

furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS
IN THE SOFTWARE.
This software is licensed under the MIT License.

Copyright Fedor Indutny, 2018.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to permit
persons to whom the Software is furnished to do so, subject to the
following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN
NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE,
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE
USE OR OTHER DEALINGS IN THE SOFTWARE.
If not otherwise noted, the extensions in this package are licensed
under the following license.

Copyright (c) 2010 by the contributors (see AUTHORS file).
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright
 notice, this list of conditions and the following disclaimer in the
 documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL,
 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.97 libmagic 5.46-r2

1.97.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
59 Temple Place - Suite 330, Boston, MA 02111-1307, USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

 The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

 When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to
 make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it

in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or
modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which
contains
a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered

independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based on
it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial distribution and only if you
received the program in object code or executable
form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary

form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source
along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time
you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution
of the Program by
all those who receive copies directly or indirectly through you, then

the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free

Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT
WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) 19yy <name of author>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License,

or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) 19yy name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and
`show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

1.98 aws-sdk-go-v2-credentials 1.18.10

1.98.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer

```
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
```

This member is required.
ClientToken *string

// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

```
 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
```

```
        with:
          path: new-ref
          fetch-depth: 0
      - name: Get Diff
        run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }} ${{ github.sha }} > refDiffFiles.txt
      - name: Get Target Files
        run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
      - name: Checkout scancode
        uses: actions/checkout@v2
        with:
          repository: nexB/scancode-toolkit
          path: scancode-toolkit
          fetch-depth: 1
      - name: Set up Python ${{ matrix.python-version }}
         uses: actions/setup-python@v2
        with:
          python-version: ${{ matrix.python-version }}
      # ScanCode
      - name: Self-configure scancode
        working-directory: ./scancode-toolkit
        run: ./scancode --help
      - name: Run Scan code on target
        run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
      - name: Run Scan code on pr ref
        run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
      # compare
      - name: License test
        run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
```

Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd

Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32
```

```
 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
```

```
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
              "target": "smithy.api#String"
           }
        },
        "traits": {
           "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
           "smithy.api#error": "client"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
           "DirectoryId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
              "traits": {
                 "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
              }
           },
           "ActiveDirectorySettings":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP \n\t\t\taddresses, and the credential provider for user administration.</p>"
              }
            },
            "ActiveDirectoryType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
              "traits": {
                "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
          "type": "structure",
          "members": {
            "DomainName": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
              }
            },
            "DomainIpv4List": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 2
                }
              }
            },
            "DomainCredentialsProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for \n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
              "code": 200,
              "method": "POST",
              "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
```

```
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
           }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
```

```
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}

    }
     },
     "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/DisassociateUser"
          },
          "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the user.</p>"
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based subscriptions.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
```

```
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
    "type": "structure",
    "members": {
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },

    "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance user.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
```

```
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",
```

```
            "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
```

```
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [
              {

                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
```

```
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                   "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

```
true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
```

```
                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
```

```
                "argv": [

            {
                    "ref": "PartitionResult"
                },
                "supportsFIPS"
            ]
        },
        true
    ]
  }
 ],
 "rules": [
  {
   "conditions": [],
   "endpoint": {

"url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                "properties": {},
                "headers": {}
            },
            "type": "endpoint"
        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "FIPS is enabled but this partition does not support FIPS",
        "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
```

```
                {

        "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]

        }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }

                ],
                    "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
```

```
                "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "error": "Invalid Configuration: Missing Region",
      "type": "error"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",

    "UseFIPS": true,
        "UseDualStack": false
      }
```

```
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
```

```
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
```

```
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
```

```
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
                }
            },
            "LicenseServerEndpointId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
```

```
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
```

```
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
       "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "InstanceSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
               }
            },
            "NextToken":
 {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
               }
            },
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>InstanceId</p>\n
</li>\n       </ul>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
         "type": "structure",
          "members": {
            "InstanceSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
 {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
```

```
        },
        "Filters": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoints": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
      },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
```

```
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
"<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

         "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
```

```
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
```

```
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
     },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
       }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/identity-provider/RegisterIdentityProvider"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
    "type": "structure",
    "members": {
      "IdentityProvider": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
            }
        },

      "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
```

```
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
          "type": "structure",
          "members": {
            "SecretId": {
              "target": "smithy.api#String",

          "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
```

```
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
          "smithy.api#http":
```

```
{
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/identity-provider/UpdateIdentityProviderSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
      "type": "structure",
       "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the identity provider to
update. "
}
},
"UpdateSettings":
{
"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
"traits": {
"smithy.api#documentation": " Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the: \n
\n \n Subnets which you want to add to provision VPC endpoints. \n \n
\n Subnets which you want to remove the VPC endpoints from. \n \n
\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
```

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string
```

```
 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
```

```
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
 err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
```

```
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
```

```
 return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
```

```
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
```

```
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string
```

```
// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string
```

```
 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
```

```
//
the request.
//
// This member is required.
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string
```

```
// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
```

```
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
```

```
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
```

```
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
```

GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE

OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

```
 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
```

```
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:       region,
 ServiceID:
   ServiceID,
 OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
 spanInitializeStart
 InterceptExecution
 RegisterServiceMetadata
 legacyEndpointContextSetter
 SetLogger
 OperationInputValidation
 spanInitializeEnd
 Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
 Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
 Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
 Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
```

CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

       "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
```

```
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
```

```
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
```

```
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
          }
        },
        "SubscriptionProviderUpdateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
          }
        },
        "DualSubscription": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
          }
```

```
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
            "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
```

```
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
```

```
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }

        ],
                        "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "ref": "UseDualStack"
                                            },
                                            true
                                        ]

}
                                ],
                                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                                "type": "error"
                            },
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": {
                                        "ref": "Endpoint"
                                    },
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
```

```
            "type": "tree"

        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "isSet",
                        "argv": [
                            {
                                "ref": "Region"
                            }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {

        "fn": "aws.partition",
                                "argv": [
                                    {
                                        "ref": "Region"
                                    }
                                ],
                                "assign": "PartitionResult"
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {

                                      "ref": "UseFIPS"
                                            },
                                            true
                                        ]
                                    },
                                    {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }

  ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"

        },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [

                         {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
                    ]
                  }
                ],
                "rules": [
                  {
```

```
                "conditions": [],

        "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],

            "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {

        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [
                    {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
```

```
                "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
                  "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "FIPS is enabled
 but this partition does not support FIPS",
              "type": "error"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
```

```
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "ref": "UseDualStack"
                                            },
                                            true

                                ]
                                    }
                                ],
                                "rules": [
                                    {
                                        "conditions": [
                                            {
                                                "fn": "booleanEquals",
                                                "argv": [
                                                    true,
                                                    {
                                                        "fn": "getAttr",
                                                        "argv": [
                                                            {

                                                            "ref": "PartitionResult"
                                                            },
                                                            "supportsDualStack"
                                                        ]
                                                    }
                                                ]
                                            }
                                        ],
                                        "rules": [
                                            {
                                                "conditions": [],
                                                "rules": [

        {
                                                        "conditions": [],
                                                        "endpoint": {
                                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                            "properties": {},
                                                            "headers": {}
                                                        },
                                                        "type": "endpoint"
                                                    }
                                                ],
                                                "type": "tree"
```

```
                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
],
"type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
```

```
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
        }
```

```
    },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
          }
         },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
```

```
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }

                 },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
```

```
    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
                      }
                    },
                    "params": {
                      "Region": "us-isob-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
                    },
                    "params": {
                      "Region": "us-isob-east-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://example.com"
                      }
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },

          {
                    "documentation": "For custom endpoint with region not set and fips disabled and dualstack
  disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://example.com"
```

```
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "Enabled",
                    "value": "Enabled",
                    "documentation": "Enabled LinuxSubscriptionsDiscovery"
                },
                {
                    "name": "Disabled",
                    "value": "Disabled",
                    "documentation": "Disabled LinuxSubscriptionsDiscovery"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
            "SourceRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "OrganizationIntegration": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
                "traits": {
                    "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
 </p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
 <li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
```

```
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
   <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
          <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListLinuxSubscriptions"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "Subscriptions"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
      "type": "structure",
      "members": {
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

        "traits": {
            "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
```

```
match a certain subscription's name.</p>\n        <p>The valid names for this filter are:</p>\n        <ul>\n
<li>\n            <p>\n                <code>Subscription</code>\n            </p>\n        </li>\n        </ul>\n
<p>The valid Operators for this filter are:</p>\n        <ul>\n        <li>\n            <p>\n
<code>contains</code>\n            </p>\n        </li>\n        <li>\n            <p>\n
<code>equals</code>\n            </p>\n        </li>\n        <li>\n            <p>\n
        <code>Notequal</code>\n            </p>\n        </li>\n        </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 16384
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
            "Subscriptions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"
```

```
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",
```

```
    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
         },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
```

```
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
              },
              {

        "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat
Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
```

```
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
```

```
    "traits": {
      "smithy.api#enum": [
        {
          "name": "InProgress",
          "value": "InProgress",
          "documentation": "InProgress status"
        },
        {
          "name": "Completed",
          "value": "Completed",
          "documentation": "Completed status"
        },
        {
          "name": "Successful",
          "value": "Successful",
          "documentation": "Successful status"
        },
        {
          "name": "Failed",
          "value": "Failed",
          "documentation": "Failed status"
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String",
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        }
      }
    },
    "traits": {
      "smithy.api#length": {
        "min": 1,
        "max": 100
      },
      "smithy.api#uniqueItems": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
      "target": "smithy.api#String"
```

```
        },
        "value": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
"list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
```

```
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
```

```
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
```

```
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
              "method": "DELETE",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
          "type": "structure",

       "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
{}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
```

```
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
                }

    },
            "Status": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,

and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work,

excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions

of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.99 tre 0.8.0-r2

1.99.1 Available under license :

This is the license, copyright notice, and disclaimer for TRE, a regex matching package (library and tools) with support for approximate matching.

Copyright (c) 2001-2009 Ville Laurikari <vl@iki.fi>
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDER AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE

OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.100 procfs 0.17.0

1.100.1 Available under license :

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
procfs provides functions to retrieve system, kernel and process
metrics from the pseudo-filesystem proc.

Copyright 2014-2015 The Prometheus Authors

This product includes software developed at
SoundCloud Ltd. (http://soundcloud.com/).

1.101 pkgconf 2.3.0-r0

1.101.1 Available under license :

Copyright (c) 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
pkgconf authors (see AUTHORS file in source directory).

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

This software is provided 'as is' and without any warranty, express or
implied. In no event shall the authors be liable for any damages arising
from the use of this software.

1.102 pcre 8.45-r3

1.102.1 Available under license :

PCRE LICENCE

Please see the file LICENCE in the PCRE distribution for licensing details.

End
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote products
  derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
NOT LIMITED TO, PROCUREMENT
 OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
PCRE LICENCE

PCRE is a library of functions to support regular expressions whose syntax
and semantics are as close as possible to those of the Perl 5 language.

Release 8 of PCRE is distributed under the terms of the "BSD" licence, as
specified below. The documentation for PCRE, supplied in the "doc"
directory, is distributed under the same terms as the software itself. The data
in the testdata directory is not copyrighted and is in the public domain.

The basic library functions are written in C and are freestanding. Also
included in the distribution is a set of C++ wrapper functions, and a
just-in-time compiler that can be used to optimize pattern matching. These
are both optional features that can be omitted when the library is built.

THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel
Email local part: Philip.Hazel
Email domain: gmail.com

University of Cambridge Computing Service,
Cambridge, England.

Copyright (c) 1997-2021 University
of Cambridge
All rights reserved.

PCRE JUST-IN-TIME COMPILATION SUPPORT

Written by: Zoltan Herczeg
Email local part: hzmester
Email domain: freemail.hu

Copyright(c) 2010-2021 Zoltan Herczeg
All rights reserved.

STACK-LESS JUST-IN-TIME COMPILER

Written by: Zoltan Herczeg
Email local part: hzmester
Email domain: freemail.hu

Copyright(c) 2009-2021 Zoltan Herczeg
All rights reserved.

THE C++ WRAPPER FUNCTIONS

Contributed by: Google Inc.

Copyright (c) 2007-2012, Google Inc.
All rights reserved.

THE "BSD" LICENCE

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce
the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.

* Neither the name of the University of Cambridge nor the name of Google
Inc. nor the names of their contributors may be used to endorse or
promote products derived from this software without specific prior
written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER
IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
POSSIBILITY OF SUCH DAMAGE.

End

1.103 github.com/aws/aws-sdk-go-v2/service/internal/presigned-url 1.13.6

1.103.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd

Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
```

```
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {
```

```
// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
```

```
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
```

Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd

Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware

UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
```

```
        "type": "structure",
        "members": {
          "DirectoryId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
            "traits": {
              "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
            }
          },
          "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
```

```
            }
          },
          "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
{
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
```

```
"com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
    "type": "structure",
    "members": {
      "Username": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
          "smithy.api#required": {}
        }
      },
      "InstanceId": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
          "smithy.api#required": {}
        }
      },
      "IdentityProvider": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
        "traits": {
          "smithy.api#documentation": "<p>The identity provider for the user.</p>",
          "smithy.api#required": {}
        }
      },
      "Domain": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
        }
      },
      "Tags": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
        }
      }
    },
    "traits": {

  "smithy.api#input": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
    "type": "structure",
    "members": {
      "InstanceUserSummary": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
           }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
```

<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete. ",
                "smithy.api#required": {}
              }
            },
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": " The type of License Server that the delete request refers to. ",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoint": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
              "traits": {
                "smithy.api#documentation": " Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted. "
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
              }
            },
            "InstanceUserArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
```

```
                    "min": 1
                },

    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
```

```
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                 "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
             "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
               }
            },
            "FailureMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
         "type": "list",
         "member": {

           "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
         "type": "structure",
         "members": {
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                  "smithy.api#required": {}
               }
            },
            "Products": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                  "smithy.api#required": {}
               }
```

```
            },
            "LastStatusCheckDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date of the last status check.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },

      "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
```

```
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                 }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
                }
            },
            "AssociationDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
                }
            },
            "DisassociationDate": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
```

```
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
   "type": "structure",
   "members": {
      "message": {
         "target": "smithy.api#String"
      }
   },
   "traits": {
      "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
       "smithy.api#error": "server",
      "smithy.api#httpError": 500
   }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
   "type": "string",
   "traits": {
      "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
   "type": "service",
   "version": "2018-05-10",
   "operations": [
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
       },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
      },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
```

```
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

        "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
              "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
```

```
        "UseFIPS": {
          "builtIn": "AWS::UseFIPS",
          "required": true,
          "default": false,
          "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
          "type": "Boolean"
        },
        "Endpoint": {
          "builtIn": "SDK::Endpoint",
          "required": false,
          "documentation": "Override the endpoint used to send this request",
          "type": "String"
        }
      },
      "rules": [
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Endpoint"
                }
              ]
            }
           ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [
                {
```

```
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                   "argv": [
                      {
                        "ref": "Region"
                      }
```

```
                ],
                "assign": "PartitionResult"
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

true

```
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
```

"fn": "booleanEquals",

```
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          }
                        ]
                      },
```

```
                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

                ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }

    ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
```

```
{
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "fn": "getAttr",
                                            "argv": [

                {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsFIPS"
                                        ]
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

  }
                    ],
```

```
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

         }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
```

```
                ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "DualStack is enabled but this partition does not support DualStack",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

            "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
      }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",

      "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS":
true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint":
{
                "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
```

```
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
```

```
                {
                  "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
                    }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack":
 false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error":
```

```
"Invalid Configuration: FIPS and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },
                  {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": true,
                      "Endpoint": "https://example.com"
                     }
                  },
                  {
                    "documentation": "Missing region",
                    "expect": {
                      "error": "Invalid Configuration: Missing Region"
                    }
                  }
                ],
                "version": "1.0"
              }
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
            "type": "structure",
            "members": {
              "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
              },
              "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
```

```
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
    "type": "string"
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
    }
},
```

```
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
    "traits": {
      "smithy.api#enum": [
         {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
         },
         {
```

```
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "IdentityProviderSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Product</p>\n          </li>\n          <li>\n            <p>DirectoryId</p>\n
</li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
              }
            },
             "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/instance/ListInstances"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
```

```
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
              }
            },
            "NextToken": {
               "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoints": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
              }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "ProductUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
              }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
```

```
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
         },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceUserSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
```

```
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
```

```
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

           "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                "smithy.api#required": {}
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
              }
            ],
            "traits": {
              "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
              "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
              },
              "smithy.api#idempotent": {}
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
            "type": "structure",
            "members": {
              "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                  "smithy.api#required": {}
                }
              },

           "Product": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                  "smithy.api#required": {}
                }
              },
              "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                  "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
              },
              "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
              }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",
```

```
        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation":
"<p>Contains settings for a specific server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "RDS_SAL",
                    "value": "RDS_SAL",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
```

```
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                "smithy.api#required": {}
              }
            }
          },

          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

             "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
```

provider. \n <note>\n
Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as Pending billing status) in Amazon Web Services Billing. For more information, see Viewing your\n\t\t\t\tmonthly charges in the Amazon Web Services Billing User Guide. \n </note>",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/user/StartProductSubscription"
}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
"type": "structure",
"members": {
"Username": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The user name
from the identity provider of the user. ",
"smithy.api#required": {}
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " An object that specifies details for the identity provider. ",
"smithy.api#required": {}
}
},
"Product": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The name of the user-based subscription product. \n
Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}
}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user for whom to start the product \n\t\t\tsubscription. "
}

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "ProductUserArn": {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
```

```
    "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    },
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 50
      },
      "smithy.api#sensitive": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
     },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
      "smithy.api#http": {
        "method": "PUT",
        "uri": "/tags/{ResourceArn}"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
```

```
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
```

```
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
```

```
            },
            "TagKeys": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                   "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
 {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
```

```
            "type": "structure",
            "members": {
                "message": {
                    "target": "smithy.api#String"
                }
            },
            "traits": {
                "smithy.api#documentation": "<p>A parameter is not valid.</p>",
                "smithy.api#error": "client"
            }
        }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
```

```
//   - ProductSKU
//
//   - Status
//
//
  - Fingerprint
//
//   - IssuerName
//
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
```

```
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string
```

```
 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
```

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
```

```
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData
```

```
// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
```

```
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string
```

```
// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {
```

```
// Date when the license is deleted.
DeletionDate *string

// License status.
Status types.LicenseDeletionStatus

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
```

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
```

```
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
```

RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider
resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                 }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
```

```
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

           "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
          }
        },
        "StatusMessage": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
          "traits": {
            "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
          }
        },
        "HomeRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
        },
        "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
        },
        "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
        },
        "RegisteredWithSubscriptionProvider": {
```

```
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
      "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
        "x-amzn-trace-id"
      ],
      "additionalExposedHeaders": [
        "x-amzn-errortype",
        "x-amzn-requestid",
        "x-amzn-trace-id"
      ]
    },
    "smithy.api#documentation": "<p>With License Manager,
```

```
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager Linux Subscriptions",
            "smithy.rules#endpointRuleSet": {
              "version": "1.0",
              "parameters": {
                "Region": {
                  "builtIn": "AWS::Region",
                  "required": false,
                  "documentation": "The AWS region used to dispatch the request.",
                  "type": "String"
                },
                "UseDualStack": {
                  "builtIn": "AWS::UseDualStack",
                  "required": true,
                  "default": false,
                  "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                   "type": "Boolean"
                },
                "UseFIPS": {
                  "builtIn": "AWS::UseFIPS",
                  "required": true,
                  "default": false,
                  "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                  "type": "Boolean"
                },
                "Endpoint": {
                  "builtIn": "SDK::Endpoint",
                  "required": false,
                  "documentation": "Override the endpoint used to send this request",
                  "type": "String"
                }
              },
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "isSet",
                      "argv": [
                        {
                          "ref": "Endpoint"
                        }
                      ]
                    }
                  ],
                  "rules": [
                    {
```

```
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }

            ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
```

```
    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {

                                    "ref": "UseFIPS"
                                        },
                                        true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
```

```
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }

  ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"

            },
                                "supportsFIPS"
                              ]
                            }
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [

                               {
                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                              ]
                            }
                          ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
```

```
      "rules": [
                                        {
                                          "conditions": [],
                                          "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                          },
                                          "type": "endpoint"
                                        }
                                      ],

                              "type": "tree"
                                    }
                                  ],
                                  "type": "tree"
                                },
                                {
                                  "conditions": [],
                                  "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                                  "type": "error"
                                }
                              ],
                              "type": "tree"
                            },
                            {

          "conditions": [
                                {
                                  "fn": "booleanEquals",
                                  "argv": [
                                    {
                                      "ref": "UseFIPS"
                                    },
                                    true
                                  ]
                                }
                              ],
                              "rules": [
                                {
                                  "conditions": [
                                    {

                        "fn": "booleanEquals",
                                        "argv": [
                                          {
```

```
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled
but this partition does not support FIPS",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
```

```
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true

                            ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [
                                                        {

                                                        "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],
                                            "type": "tree"

                                }
                                    ],
```

```
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {

         "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
              }

    },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
           },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
              }

           },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": false,
              "UseDualStack": true
```

```
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

  "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
              }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
```

```
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
```

```
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
    "type": "structure",
    "members": {
        "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },
        "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
 <li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
 one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
 <p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
```

```
<p>\n <code>Notequal</code>\n </p>\n </li>\n </ul>"
        }
      },
      "MaxResults": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
        "traits": {
          "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
          "smithy.api#length": {
            "min": 1,
            "max": 16384
          }
        }
      }
    },
    "traits": {
      "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
    "type": "structure",
    "members": {
      "Instances": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
        "traits": {
          "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
        }
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
    "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those
that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n
<code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n
<li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n
<p>The valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n
```

```
<code>contains</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>equals</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
      <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "RegisteredSubscriptionProviders"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSources": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

  "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
          }
```

```
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
            "smithy.api#range": {
              "min": 1,
              "max": 100
            }
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
          }
        }
      },

      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
           }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}

             }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
```

```
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {
```

```
    "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },

         {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
```

```
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
             "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
             "smithy.api#required": {}
           }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
             "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat
Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
             "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
             "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
             "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
```

```
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
              }
            },
            "SubscriptionProviderStatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
              }
```

```
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {

                  "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "InProgress",
```

```
            "value": "InProgress",
            "documentation": "InProgress status"
          },
          {
            "name": "Completed",
            "value": "Completed",
            "documentation": "Completed status"
          },
          {
            "name": "Successful",
            "value": "Successful",
            "documentation": "Successful status"
          },
          {
            "name": "Failed",
            "value": "Failed",
            "documentation": "Failed status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

     "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
"list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
```

```
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                 "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
      "type": "map",
      "key":
{
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

   "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tagKeys": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
```

```
        "traits": {
            "smithy.api#input":
{}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
```

```
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
            }
        },
        "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
            }
        },
        "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
        }

    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
    "type": "structure",
    "members": {
      "LinuxSubscriptionsDiscovery": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
        "traits": {
          "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
        }
      },
      "LinuxSubscriptionsDiscoverySettings": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
        "traits": {
          "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
        }

  },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
```

```
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all

other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.104 aws-sdk-go-v2-internal-configsources 1.4.6

1.104.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity

```
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
```

```
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string

 // Product name.
 //
 // This member is required.
 ProductName *string
```

```
 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // Date and time range during which the license is valid, in ISO8601-UTC format.
 //
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
```

```
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
```

```
  name: License Scan
  runs-on: ubuntu-latest
  strategy:
    matrix:
      python-version: [3.9]

  steps:
    - name: Checkout target
      uses: actions/checkout@v2
      with:
        path: sdkbase
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
       uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
```

spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming

RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer

InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "SELF_MANAGED",
            "value": "SELF_MANAGED",
            "documentation": "SELF_MANAGED type of Active Directory"
          },
          {
            "name": "AWS_MANAGED",
            "value": "AWS_MANAGED",
            "documentation": "AWS_MANAGED type of Active Directory"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n          <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http":
{
            "code": 200,
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
```

```
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current
```

```
state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS)
license server.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
```

```
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
```

```
resource that was deleted.</p>"
                }
              }
            },
             "traits": {
              "smithy.api#output": {}
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
            "type": "operation",
            "input": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
            },
            "output": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
            },
            "errors": [
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
               },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
              }
            ],
            "traits": {
              "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
              "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
              },
              "smithy.api#idempotent": {}
```

```
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
```

```
    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
```

```
            "smithy.api#idempotent": {}

        }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
            "type": "structure",
            "members": {
                "Username": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                    }
                },
                "InstanceId": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                    }
                },
                "IdentityProvider": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                    "traits": {
                        "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                    }
                },
                "InstanceUserArn": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                    "traits": {
                        "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                    }
                },
                "Domain": {
                    "target": "smithy.api#String",
                    "traits": {
                        "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
                    }
                }
            },
            "traits": {
                "smithy.api#input": {}
            }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
```

```
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
```

```
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
```

```
        "Settings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProviderArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
          }
        },
        "FailureMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },

    "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
            "smithy.api#required": {}
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
           }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
          }
        },
```

```
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
                }
            },
            "AssociationDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
                }
            },
            "DisassociationDate": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
```

```
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

       "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
```

```
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
```

```
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [
                {

                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": {
                  "ref": "Endpoint"
                },

"properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
```

```
        ],
        "type": "tree"
      },
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Region"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "aws.partition",

                "argv": [
                  {
                    "ref": "Region"
                  }
                ],
                "assign": "PartitionResult"
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
```

true

```
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
```

```
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

 "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

            ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
```

```
                    },
                    "type": "endpoint"
                }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

  {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
                                "argv": [

{
                                        "ref": "PartitionResult"
                                    },
                                    "supportsFIPS"
                                ]
                            },
                            true
                        ]
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"

}
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {

    "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
```

```
                                        "ref": "PartitionResult"
                                    },
                                    "supportsDualStack"
                                ]

        }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }

                    ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

            "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    }
],
"type": "tree"
```

```
            },
            {
              "conditions": [],
              "error": "Invalid Configuration: Missing Region",
              "type": "error"
            }
          ]
        },
        "smithy.rules#endpointTests": {
          "testCases": [
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
              "expect":
{
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
```

```
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": false,
                 "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
```

```
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
false,
            "Endpoint": "https://example.com"
```

```
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true,
        "Endpoint": "https://example.com"
       }
    },
    {
      "documentation": "Missing region",
      "expect": {
        "error": "Invalid Configuration: Missing Region"
      }
    }
  ],
```

```
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
              "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The type of license server.</p>"
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
 {
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
              "value": "PROVISIONED",
              "documentation": ""
            },
            {
              "name": "DELETING",
              "value": "DELETING",
              "documentation": ""
            },
            {
              "name": "DELETION_FAILED",
              "value": "DELETION_FAILED",
```

```
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
      "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
```

```
            "ServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "IdentityProviderSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Product</p>\n          </li>\n          <li>\n            <p>DirectoryId</p>\n
</li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {

   "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
```

```
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
```

```
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
           "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

        }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
 "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for this product
```

```
user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

          "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
                }
            },
            "SubscriptionStartDate": {
                "target": "smithy.api#String",
```

```
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",

        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {
```

```
        "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                "smithy.api#required": {}

             }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
          "type": "structure",
          "members": {
            "ProductUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {

   "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
        "smithy.api#http":
{
          "code": 200,
          "method": "POST",
          "uri": "/user/StopProductSubscription"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
```

```
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
```

```
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
                }
```

```
        },
        "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
    <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
      }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
```

```
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense
```

```
 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
```

```
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
```

```
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
```

```
//   - Beneficiary
//
//   - ProductSKU
//
//   - Fingerprint
//
//   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
```

```
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
```

```
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
```

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
```

```
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:       region,
 ServiceID:    ServiceID,
 OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}
```

```
type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string
```

```
// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
```

```
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
```

```
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
```

```
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {
```

```
// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
```

```
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
```

```
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)
```

```
// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options)) (*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}
```

```
type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
```

```
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
```

```
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {
```

```
 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
```

```
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
```

```
 return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
```

ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from

this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
```

```
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
```

RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
```

```
    {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
```

```
            }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

           "traits": {
                "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
              }
            },
            "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
```

```
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
               "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
        },
```

```
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
```

```
"type": "service",
"version": "2018-05-10",
"operations": [
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
     },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
],
"traits": {
    "aws.api#service": {
        "sdkId": "License Manager Linux Subscriptions",
         "arnNamespace": "license-manager-linux-subscriptions",
        "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
        "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
```

```
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                 "type": "Boolean"
              },
              "UseFIPS": {
                "builtIn": "AWS::UseFIPS",
                "required": true,
                "default": false,
                "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                "type": "Boolean"
              },
              "Endpoint": {
                "builtIn": "SDK::Endpoint",
                "required": false,
                "documentation": "Override the endpoint used to send this request",
                "type": "String"
              }
```

```
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }

    ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]

}
                    ],
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                    "type": "error"
```

```
            },
            {
              "conditions": [],
              "endpoint": {
                "url": {
                  "ref": "Endpoint"
                },
                "properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ],
          "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Region"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {

    "fn": "aws.partition",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ],
                "assign": "PartitionResult"
              }
            ],
            "rules": [
```

```
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {

                    "ref": "UseFIPS"
                        },
                        true
                      ]
                    },
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseDualStack"
                        },
                        true
                      ]
                    }

],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [
                                {
                                  "ref": "PartitionResult"

            },
                                "supportsFIPS"
                              ]
                            }
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
```

```
                                        "argv": [

                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],

    "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
```

```
                                    {
                                        "ref": "UseFIPS"
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {

                    "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "fn": "getAttr",
                                                "argv": [
                                                    {
                                                        "ref": "PartitionResult"
                                                    },
                                                    "supportsFIPS"
                                                ]
                                            },
                                            true

                                        ]
                                    }
                                ],
                                "rules": [
                                    {
                                        "conditions": [],
                                        "rules": [
                                            {
                                                "conditions": [],
                                                "endpoint": {
                                                    "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                    "headers": {}
                                                },
                                                "type": "endpoint"
                                            }
                                        ],
                                        "type": "tree"
                                    }
                                ],
                                "type": "tree"
```

```
                },
                {
                  "conditions": [],
                  "error": "FIPS is enabled
but this partition does not support FIPS",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true

          ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {

                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]
                        }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "rules": [
```

```
        {
                                                "conditions": [],
                                                "endpoint": {
                                                   "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                   "properties": {},
                                                   "headers": {}
                                                },
                                                "type": "endpoint"
                                             }
                                          ],
                                          "type": "tree"

                                    }
                                       ],
                                       "type": "tree"
                                    },
                                    {
                                       "conditions": [],
                                       "error": "DualStack is enabled but this partition does not support DualStack",
                                       "type": "error"
                                    }
                                 ],
                                 "type": "tree"
                              },
                              {
                                 "conditions": [],
                                 "rules": [
                                    {
                                       "conditions": [],
                                       "endpoint": {
                                          "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                          "properties": {},
                                          "headers": {}
                                       },
                                       "type": "endpoint"
                                    }
                                 ],
                                 "type": "tree"
                              }
                           ],
                           "type": "tree"
                        }
                     ],
                     "type": "tree"
                  },
                  {
```

```
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ],
            "type": "tree"
          }
        ]
      },
      "smithy.rules#endpointTests": {
        "testCases": [
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {

         "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }

      },
      "params": {
        "Region": "us-gov-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }

    },
        "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
```

```
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://example.com"
                }
            },
            "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "Missing region",
```

```
                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
                }
            ],
            "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
          },
          {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
      "type": "structure",
      "members": {
        "SourceRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "OrganizationIntegration": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
          "traits": {
            "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
```

```
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
```

```
that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
        <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
            <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional
 objects.</p>"
              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Subscriptions"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 16384
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "NextToken
       length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
          "type": "structure",
          "members": {
            "Subscriptions": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
```

```
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "RegisteredSubscriptionProviders"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSources": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

  "traits": {
                    "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
                }
            }
        },

        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
            "RegisteredSubscriptionProviders": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
                "traits": {
                    "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
```

```
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}

            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "EQUAL",
              "value": "Equal",
              "documentation": "Equal operator"
            },
            {
              "name": "NOT_EQUAL",
              "value": "NotEqual",
              "documentation": "Not equal operator"
            },
            {
              "name": "CONTAINS",
              "value": "Contains",
              "documentation": "Contains operator"
            }
          ],
```

```
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {

                "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
```

```
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
              }
            },
            "SubscriptionProviderArn": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
```

```
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
```

```
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
                {
                    "name": "Successful",
                    "value": "Successful",
                    "documentation": "Successful status"
                },
                {
                    "name": "Failed",
                    "value": "Failed",
                    "documentation": "Failed status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#length": {
                    "min": 1,
                    "max": 100
                }
            }
```

```
        },
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            },
            "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the subscription.</p>"
                }
            },
            "Type": {
                "target": "smithy.api#String",
                "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with
Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace.
Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing
from Amazon EC2 or BYOS.</p>"
                }
            },
            "InstanceCount": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
                "traits": {
                    "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
```

```
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{resourceArn}"
            },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
```

```
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

  "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
{}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
```

```
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
          }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
              }

    },
            "Status": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
              }
            },
            "StatusMessage": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
              "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
              }
            },
            "HomeRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
              }
             }
          }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
          }
      }
  }
```

}

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain

separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without

modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include

the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt

RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.105 alpine-baselayout-data 3.6.8-r1

1.105.1 Available under license :

```
# Automatically generated by apkbuild-cpan, template 1
# Contributor: Francesco Colista <francesco.colista@gmail.com>
# Maintainer: Francesco Colista <francesco.colista@gmail.com>
pkgname=perl-software-license
_pkgreal=Software-License
pkgver=0.103004
pkgrel=0
pkgdesc="packages that provide templated software licenses"
url="http://search.cpan.org/dist/Software-License/"
arch="noarch"
license="GPL PerlArtistic"
cpandepends="perl-text-template perl-data-section perl-sub-install"
cpanmakedepends="    "
depends="$cpandepends"
makedepends="perl-dev $cpanmakedepends"
subpackages="$pkgname-doc"
source="http://search.cpan.org/CPAN/authors/id/R/RJ/RJBS/$_pkgreal-$pkgver.tar.gz"
```

```
_builddir="$srcdir/$_pkgreal-$pkgver"

prepare() {
 cd "$_builddir"
 export CFLAGS=`perl -MConfig -E 'say $Config{ccflags}'`
 PERL_MM_USE_DEFAULT=1 perl Makefile.PL INSTALLDIRS=vendor
}

build() {
 cd "$_builddir"
 export CFLAGS=`perl -MConfig -E 'say $Config{ccflags}'`
 make && make test
}

package() {
 cd "$_builddir"
 make
 DESTDIR="$pkgdir" install || return 1
 find "$pkgdir" \( -name perllocal.pod -o -name .packlist \) -delete
}

md5sums="0c5fd53d93818566234578b27d667b35  Software-License-0.103004.tar.gz"
```

IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials
(collectively, the "Software") until you have carefully read the
following terms and conditions. By loading or using the Software, you
agree to the terms of this Agreement. If you do not wish to so agree,
do not install or use the Software.

1. COPYRIGHT NOTICE
Some or all of this work - Copyright 1999-2011, Intel Corp. All
rights reserved.

2. LICENSE

2.1. This is your license from Intel Corp. under its intellectual
property rights. You may have additional license terms from the party
that provided you this software, covering your right to use that
party's intellectual property rights.

2.2. Intel grants, free of charge, to any person ("Licensee")
obtaining a copy of the source code appearing in this file ("Covered
Code") an irrevocable, perpetual, worldwide license under Intel's
copyrights in the base code distributed originally by Intel ("Original
Intel
 Code") to copy, make derivatives, distribute, use and display
any portion of the Covered Code in any form, with the right to

sublicense such rights; and

2.3. Intel grants Licensee a non-exclusive and non-transferable patent license (with the right to sublicense), under only those claims of Intel patents that are infringed by the Original Intel Code, to make, use, sell, offer to sell, and import the Covered Code and derivative works thereof solely to the minimum extent necessary to exercise the above copyright license, and in no event shall the patent license extend to any additions to or modifications of the Original Intel Code. No other license or right is granted directly or by implication, estoppel or otherwise; The above copyright and patent license is granted only if the following conditions are met:

3. CONDITIONS

3.1. Redistribution of Source with Rights to Further Distribute Source. Redistribution of source code of any substantial portion of the Covered Code or
modification with rights to further distribute
source must include the above Copyright Notice, the above License, this list of Conditions, and the following Disclaimer and Export Compliance provision. In addition, Licensee must cause all Covered Code to which Licensee contributes to contain a file documenting the changes Licensee made to create that Covered Code and the date of any change. Licensee must include in that file the documentation of any changes made by any predecessor Licensee. Licensee must include a prominent statement that the modification is derived, directly or indirectly, from Original Intel Code.

3.2. Redistribution of Source with no Rights to Further Distribute Source. Redistribution of source code of any substantial portion of the Covered Code or modification without rights to further distribute source must include the following Disclaimer and Export Compliance provision in the documentation and/or other materials provided with distribution. In addition,
Licensee may not authorize further
sublicense of source of any portion of the Covered Code, and must include terms to the effect that the license from Licensee to its licensee is limited to the intellectual property embodied in the software Licensee provides to its licensee, and not to intellectual property embodied in modifications its licensee may make.

3.3. Redistribution of Executable. Redistribution in executable form of any substantial portion of the Covered Code or modification must reproduce the above Copyright Notice, and the following Disclaimer and Export Compliance provision in the documentation and/or other materials provided with the distribution.

3.4. Intel retains all right, title, and interest in and to the Original Intel Code.

3.5. Neither the name Intel nor any other trademark owned or controlled by Intel shall be used in advertising or otherwise to promote the sale, use or other dealings in products derived from or relating to the Covered Code without prior written authorization from Intel.

4. DISCLAIMER AND EXPORT COMPLIANCE

4.1. INTEL MAKES NO WARRANTY OF ANY KIND REGARDING ANY SOFTWARE PROVIDED HERE. ANY SOFTWARE ORIGINATING FROM INTEL OR DERIVED FROM INTEL SOFTWARE IS PROVIDED "AS IS," AND INTEL WILL NOT PROVIDE ANY SUPPORT, ASSISTANCE, INSTALLATION, TRAINING OR OTHER SERVICES. INTEL WILL NOT PROVIDE ANY UPDATES, ENHANCEMENTS OR EXTENSIONS. INTEL SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE.

4.2. IN NO EVENT SHALL INTEL HAVE ANY LIABILITY TO LICENSEE, ITS LICENSEES OR ANY OTHER THIRD PARTY, FOR ANY LOST PROFITS, LOST DATA, LOSS OF USE OR COSTS OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES, OR FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS AGREEMENT, UNDER ANY CAUSE OF ACTION OR THEORY OF LIABILITY, AND IRRESPECTIVE OF WHETHER INTEL HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. THESE LIMITATIONS SHALL APPLY NOTWITHSTANDING THE FAILURE OF THE ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

4.3. Licensee shall not export, either directly or indirectly, any of this software or system incorporating such software without first obtaining any required license or other approval from the U. S. Department of Commerce or any other agency or department of the United States Government. In the event Licensee exports any such software from the United States or re-exports any such software from a foreign destination, Licensee shall ensure that the distribution and export/re-export of the software is in compliance with all laws, regulations, orders, or other restrictions of the U.S. Export Administration Regulations. Licensee agrees that neither it nor any of its subsidiaries will export/re-export any technical data, process, software, or service, directly or indirectly, to any country for which the United States government or any agency thereof requires an export license, other governmental approval, or letter of assurance, without first obtaining such license, approval or letter.
INTEL SOFTWARE LICENSE AGREEMENT

IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.

LICENSES: Please Note:
- If you are a network administrator, the "Site License" below shall apply to you.
- If you are an end user, the "Single User License" shall apply to you.
- If you are an original equipment manufacturer (OEM), the "OEM License" shall apply to you.

SITE LICENSE. You may copy the Software onto your organization's computers for your organization's use, and you may make a reasonable number of back-up copies of the Software, subject to these conditions:

1. This Software is licensed for use only in conjunction with Intel component products. Use of the Software in conjunction with non-Intel component
products is not licensed hereunder.
2. You may not copy, modify, rent, sell, distribute or transfer any part of the Software except as provided in this Agreement, and you agree to prevent unauthorized copying of the Software.
3. You may not reverse engineer, decompile, or disassemble the Software.
4. You may not sublicense or permit simultaneous use of the Software by more than one user.
5. The Software may include portions offered on terms in addition to those set out here, as set out in a license accompanying those portions.

SINGLE USER LICENSE. You may copy the Software onto a single computer for your personal, noncommercial use, and you may make one back-up copy of the Software, subject to these conditions:

1. This Software is licensed for use only in conjunction with Intel component products. Use of the Software in conjunction with non-Intel component products is not licensed hereunder.
2. You may not copy, modify, rent, sell, distribute or transfer any part
of
the Software except as provided in this Agreement, and you agree to prevent unauthorized copying of the Software.
3. You may not reverse engineer, decompile, or disassemble the Software.
4. You may not sublicense or permit simultaneous use of the Software by more than one user.
5. The Software may include portions offered on terms in addition to those set out here, as set out in a license accompanying those portions.

OEM LICENSE: You may reproduce and distribute the Software only as an

integral part of or incorporated in Your product or as a standalone Software maintenance update for existing end users of Your products, excluding any other standalone products, subject to these conditions:

1. This Software is licensed for use only in conjunction with Intel component products. Use of the Software in conjunction with non-Intel component products is not licensed hereunder.
2. You may not copy, modify, rent, sell, distribute or transfer any part of the Software except as provided in this Agreement, and you agree to prevent unauthorized copying of the Software.
3. You may not reverse engineer, decompile, or disassemble the Software.
4. You may only distribute the Software to your customers pursuant to a written license agreement. Such license agreement may be a "break-the-seal" license agreement. At a minimum such license shall safeguard Intel's ownership rights to the Software.
5. The Software may include portions offered on terms in addition to those set out here, as set out in a license accompanying those portions.

NO OTHER RIGHTS. No rights or licenses are granted by Intel to You, expressly or by implication, with respect to any proprietary information or patent, copyright, mask work, trademark, trade secret, or other intellectual property right owned or controlled by Intel, except as expressly provided in this Agreement.

OWNERSHIP OF SOFTWARE AND COPYRIGHTS. Title to all copies of the Software remains with Intel or its suppliers. The Software is copyrighted and protected by the laws of the United States and other countries, and international treaty provisions. You may not remove any copyright notices from the Software. Intel may make changes to the Software, or to items referenced therein, at any time without notice, but is not obligated to support or update the Software. Except as otherwise expressly provided, Intel grants no express or implied right under Intel patents, copyrights, trademarks, or other intellectual property rights. You may transfer the Software only if the recipient agrees to be fully bound by these terms and if you retain no copies of the Software.

LIMITED MEDIA WARRANTY. If the Software has been delivered by Intel on physical media, Intel warrants the media to be free from material physical defects for a period of ninety days after delivery by Intel. If such a defect is found, return the media to Intel for replacement or alternate delivery of the Software as Intel may select.

EXCLUSION OF OTHER WARRANTIES. EXCEPT AS PROVIDED ABOVE, THE SOFTWARE IS PROVIDED "AS IS" WITHOUT ANY EXPRESS OR IMPLIED WARRANTY OF ANY KIND INCLUDING WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT, OR FITNESS FOR A

PARTICULAR PURPOSE. Intel does not warrant or assume responsibility for the
accuracy or completeness of any information, text, graphics, links or other
items contained within the Software.

LIMITATION OF LIABILITY. IN NO EVENT SHALL INTEL OR ITS SUPPLIERS BE LIABLE
FOR ANY DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, LOST PROFITS,
BUSINESS INTERRUPTION, OR LOST INFORMATION) ARISING OUT OF THE USE OF OR
INABILITY TO USE THE SOFTWARE, EVEN IF INTEL HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES. SOME JURISDICTIONS PROHIBIT EXCLUSION OR
LIMITATION OF LIABILITY FOR IMPLIED WARRANTIES OR CONSEQUENTIAL OR INCIDENTAL
DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. YOU MAY ALSO HAVE
OTHER LEGAL RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

TERMINATION OF THIS AGREEMENT. Intel may terminate this Agreement
at any time
if you violate its terms. Upon termination, you will immediately destroy the
Software or return all copies of the Software to Intel.

APPLICABLE LAWS. Claims arising under this Agreement shall be governed by the
laws of California, excluding its principles of conflict of laws and the
United Nations Convention on Contracts for the Sale of Goods. You may not
export the Software in violation of applicable export laws and regulations.
Intel is not obligated under any other agreements unless they are in writing
and signed by an authorized representative of Intel.

GOVERNMENT RESTRICTED RIGHTS. The Software is provided with "RESTRICTED
RIGHTS." Use, duplication, or disclosure by the Government is subject to
restrictions as set forth in FAR52.227-14 and DFAR252.227-7013 et seq. or its
successor. Use of the Software by the Government constitutes acknowledgment
of Intel's proprietary rights therein. Contractor or Manufacturer is Intel
2200 Mission College Blvd., Santa Clara, CA
95052.

```
/*
* Copyright (c) 1983, 1988 Regents of the University of California.
* All rights reserved.
*
* Redistribution and use in source and binary forms are permitted
* provided that the above copyright notice and this paragraph are
* duplicated in all such forms and that any documentation,
* advertising materials, and other materials related to such
* distribution and use acknowledge that the software was developed
* by the University of California, Berkeley.  The name of the
* University may not be used to endorse or promote products derived
* from this software without specific prior written permission.
* THIS SOFTWARE IS PROVIDED ``AS IS'' AND WITHOUT ANY EXPRESS OR
* IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED
* WARRANTIES OF MERCHANTIBILITY AND FITNESS FOR A PARTICULAR PURPOSE.
*/
```

```
# Contributor: Fabian Affolter <fabian@affolter-engineering.ch>
# Maintainer: Fabian Affolter <fabian@affolter-engineering.ch>
pkgname=py-flake8-copyright
_pkgname=flake8-copyright
pkgver=0.2.0
pkgrel=0
pkgdesc="Extension for flake8 which checks for copyrights"
url="https://github.com/savoirfairelinux/flake8-copyright"
arch="noarch"
license="MIT"
depends="flake8"
makedepends="python3-dev"
source="https://files.pythonhosted.org/packages/source/${_pkgname:0:1}/$_pkgname/$_pkgname-$pkgver.tar.gz"
builddir="$srcdir"/$_pkgname-$pkgver

build() {
 cd "$builddir"
 python3 setup.py build || return 1
}

package() {
 cd "$builddir"
 python3 setup.py install --prefix=/usr --root="$pkgdir" || return 1
}

md5sums="c6348990c6d74933bf5d5f6a55a14bdf  flake8-copyright-0.2.0.tar.gz"
sha256sums="aeef26eb4d5223c9cd5b101e68175fcef6d2b353bf36da688fdde62fccfe2b73  flake8-copyright-
0.2.0.tar.gz"
sha512sums="bab1bfaeed3a525ac3c7da12b1f2ec338c204cc69b72d05cd39560e528faff5d586c3b1be9570f4a977a7e
2417b586e543bfba12abce256b2023c8c4993eeb90
  flake8-copyright-0.2.0.tar.gz"
SQLite Copyright
SQLite is in the
Public Domain
```

All of the deliverable code in SQLite has been dedicated to the public domain by the authors. All code authors, and representatives of the companies they work for, have signed affidavits dedicating their contributions to the public domain and originals of those signed affidavits are stored in a firesafe at the main offices of Hwaci. Anyone is free to copy, modify, publish, use, compile, sell, or distribute the original SQLite code, either in source code form or as a compiled binary, for any purpose, commercial or non-commercial, and by any means.

The previous paragraph applies to the deliverable code in SQLite - those parts of the SQLite library that you actually bundle and ship with a larger application. Portions of the documentation and some code used as part of the build process might fall under other licenses. The details here are unclear. We do not worry about the licensing of the documentation and build code so much because none
 of these things are part of the core deliverable SQLite library.

All of the deliverable code in SQLite has been written from scratch. No code has been taken from other projects or from the open internet. Every line of code can be traced back to its original author, and all of those authors have public domain dedications on file. So the SQLite code base is clean and is uncontaminated with licensed code from other projects.
Obtaining An Explicit License To Use SQLite

Even though SQLite is in the public domain and does not require a license, some users want to obtain a license anyway. Some reasons for obtaining a license include:
You are using SQLite in a jurisdiction that does not recognize the public domain.
You are using SQLite in a jurisdiction that does not recognize the right of an author to dedicate their work to the public domain.
You want to hold a tangible legal document as evidence that you have the legal right to use and distribute SQLite.
Your legal department tells
you that you have to purchase a license.

If you feel like you really have to purchase a license for SQLite, Hwaci, the company that employs the architect and principal developers of SQLite, will sell you one.
Contributed Code

In order to keep SQLite completely free and unencumbered by copyright, all new contributors to the SQLite code base are asked to dedicate their contributions to the public domain. If you want to send a patch or enhancement for possible inclusion in the SQLite source tree, please accompany the patch with the following statement:
The author or authors of this code dedicate any and all copyright interest in this code to the public domain. We make this dedication for the benefit of the public at large and to the detriment of our heirs and successors. We intend this dedication to be an overt act of relinquishment in perpetuity of all present and future rights to this code under copyright law.

We are not able to accept patches or changes to SQLite that are not accompanied
by a statement such as the above. In addition, if you make changes or enhancements as an employee, then a simple statement such as the above is insufficient. You must also send by surface mail a copyright release signed by a company officer. A signed original of the copyright release should be mailed to:
Hwaci
6200 Maple Cove Lane
Charlotte, NC 28269
USA

A template copyright release is available in PDF or HTML. You can use this release to make future changes.

see http://www.sqlite.org/copyright.html
Copyright (c) 2016 The Khronos Group Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software source and associated documentation files (the "Materials"),
to deal in the Materials without restriction, including without limitation
the rights to use, copy, modify, compile, merge, publish, distribute,
sublicense, and/or sell copies of the Materials, and to permit persons to
whom the Materials are furnished to do so, subject the following terms and
conditions:

All modifications to the Materials used to create a binary that is
distributed to third parties shall be provided to Khronos with an
unrestricted license to use for the purposes of implementing bug fixes and
enhancements to the Materials;

If the binary is used as part of an OpenCL(TM) implementation, whether binary
is distributed together with or separately to that implementation, then
recipient must become an OpenCL Adopter and follow the published OpenCL
conformance process for that implementation,
details at:
http://www.khronos.org/conformance/;

The above copyright notice, the OpenCL trademark license, and this permission
notice shall be included in all copies or substantial portions of the
Materials.

THE MATERIALS ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE MATERIALS OR THE USE OR OTHER DEALINGS IN THE MATERIALS.

OpenCL is a trademark of Apple Inc. used under license by Khronos.
mini_sendmail - accept email on behalf of real sendmail

Copyright 1999,2015 by Jef Poskanzer <jef@mail.acme.com>.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING,
BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)

```
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.
# Automatically generated by apkbuild-cpan, template 1
# Contributor: Valery Kartel <valery.kartel@gmail.com>
# Maintainer: Valery Kartel <valery.kartel@gmail.com>
pkgname=perl-bsd-resource
_pkgreal=BSD-Resource
pkgver=1.2909
pkgrel=1
pkgdesc="Perl extension implements the BSD process resource limit functions"
url="http://search.cpan.org/dist/BSD-Resource/"
arch="all"
license="GPL PerlArtistic"
cpandepends=""
cpanmakedepends="    "
depends="$cpandepends"
makedepends="perl-dev $cpanmakedepends"
subpackages="$pkgname-doc"
source="http://search.cpan.org/CPAN/authors/id/J/JH/JHI/$_pkgreal-$pkgver.tar.gz"

_builddir="$srcdir/$_pkgreal-$pkgver"

prepare() {
 cd "$_builddir"
 export CFLAGS=`perl -MConfig -E 'say $Config{ccflags}'`
 PERL_MM_USE_DEFAULT=1 perl Makefile.PL INSTALLDIRS=vendor
}

build() {
 cd "$_builddir"
 export CFLAGS=`perl -MConfig -E 'say $Config{ccflags}'`
 make && make test || return 1
}

package() {
 cd "$_builddir"
 make DESTDIR="$pkgdir" install || return 1
 find "$pkgdir"
 \( -name perllocal.pod -o -name .packlist \) -delete
}

md5sums="3c6dd2fa953088aa87e263f40818d012  BSD-Resource-1.2909.tar.gz"
sha256sums="c47d460e2bd00d8d049f6ff4a0f1f61957e289e8de45af5fc79e851e2e855e06  BSD-Resource-
1.2909.tar.gz"
sha512sums="5f489eaac5089e82081b7cf51d62638750e443751b49415407354da96b17771819b5e6e85529faa41ddd
85743363750157943c7f7700276cce2bd40a429fa430  BSD-Resource-1.2909.tar.gz"
```

```
# Maintainer: Natanael Copa <ncopa@alpinelinux.org>
pkgname=libart-lgpl
pkgver=2.3.21
pkgrel=5
pkgdesc="A library for high-performance 2D graphics"
url="http://www.levien.com/libart/"
arch="all"
license="LGPL"
depends=
makedepends=
subpackages="$pkgname-dev"
source="http://ftp.gnome.org/pub/GNOME/sources/libart_lgpl/2.3/libart_lgpl-$pkgver.tar.bz2
 "

_builddir="$srcdir"/libart_lgpl-$pkgver

prepare() {
 cd "$_builddir"
 update_config_sub || return 1
}
build() {
 cd "$_builddir"
 ./configure \
  --build=$CBUILD \
  --host=$CHOST \
  --prefix=/usr \
  || return 1
 make || return 1
}

package() {
 cd "$_builddir"
 make DESTDIR="$pkgdir" install || return 1
}

md5sums="08559ff3c67fd95d57b0c5e91a6b4302  libart_lgpl-2.3.21.tar.bz2"
```

1.106 prometheus-client-model 0.6.2

1.106.1 Available under license :

Data model artifacts for Prometheus.
Copyright 2012-2015 The Prometheus Authors

This product includes software developed at
SoundCloud Ltd. (http://soundcloud.com/).

Apache License
Version 2.0, January 2004

http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including

the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or

Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the

origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier

identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

1.107 x-net 0.43.0

1.107.1 Available under license :

Copyright 2009 The Go Authors.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google LLC nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.108 libmd 1.1.0-r0

1.108.1 Available under license :

Format: https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/

Files:
*
Copyright:
Copyright 2009, 2011, 2016 Guillem Jover <guillem@hadrons.org>
License: BSD-3-clause
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote products
   derived from this software without specific prior written permission.
.
THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY
AND FITNESS FOR A PARTICULAR
 PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL
THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS;
OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF
ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Files:
include/sha2.h
src/sha2.c
Copyright:
Copyright 2000-2001, Aaron D. Gifford
All rights reserved.
License: BSD-3-clause-Aaron-D-Gifford
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce

the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of contributors
may be used to endorse or promote products derived from this software
without specific prior written permission.
.
THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTOR(S) ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTOR(S) BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE
OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

Files:
include/rmd160.h
src/rmd160.c
Copyright:
Copyright 2001 Markus Friedl. All rights reserved.
License: BSD-2-clause
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
.
THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR BE LIABLE
FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Files:

src/md2.c
Copyright:
Copyright (c) 2001 The NetBSD Foundation, Inc.
All rights reserved.
.
This code is derived from software contributed to The NetBSD Foundation
by Andrew Brown.
License: BSD-2-clause-NetBSD
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must
 reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
.
THIS SOFTWARE IS PROVIDED BY THE NETBSD FOUNDATION, INC. AND CONTRIBUTORS
``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED
TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE FOUNDATION OR CONTRIBUTORS
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
POSSIBILITY OF SUCH DAMAGE.

Files:
man/rmd160.3
man/sha1.3
man/sha2.3
Copyright:
 Copyright 1997, 2003, 2004 Todd C. Miller <Todd.Miller@courtesan.com>
License: ISC
Permission to use, copy, modify, and distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.
.
THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Files:
man/mdX.3
src/helper.c
Copyright:
Poul-Henning Kamp <phk@login.dkuug.dk>
License: Beerware
"THE BEER-WARE LICENSE" (Revision 42):
<phk@login.dkuug.dk> wrote this file. As long as you retain
this notice you
can do whatever you want with this stuff. If we meet some day, and you think
this stuff is worth it, you can buy me a beer in return. Poul-Henning Kamp

Files:
include/md4.h
src/md4.c
Copyright:
Colin Plumb
Todd C. Miller
License: public-domain-md4
This code implements the MD4 message-digest algorithm.
The algorithm is due to Ron Rivest. This code was
written by Colin Plumb in 1993, no copyright is claimed.
This code is in the public domain; do with it what you wish.
Todd C. Miller modified the MD5 code to do MD4 based on RFC 1186.

Files:
include/md5.h
src/md5.c
Copyright:
Colin Plumb
License: public-domain-md5
This code implements the MD5 message-digest algorithm.
The algorithm is due to Ron Rivest. This code was
written by Colin Plumb in 1993, no copyright is claimed.
This code is in the public domain; do with it what you wish.

Files:
include/sha1.h
src/sha1.c
Copyright:
Steve Reid <steve@edmweb.com>
License: public-domain-sha1
100% Public
Domain

1.109 github.com/aws/aws-sdk-go-v2/feature/ec2/imds 1.18.6

1.109.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody

```
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
```

```
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
```

```
//
// This member is required.
Beneficiary *string

// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
//
This member is required.
ClientToken *string

// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string
```

```
 // Date and time range during which the license is valid, in ISO8601-UTC format.
 //
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
```

```
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
```

ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd

Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
      "type": "structure",
```

```
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
```

```
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n         <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
                }
            },
```

```
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current
state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

       {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS)
license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
    "type": "structure",
    "members": {
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
    "type": "union",
```

```
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoint": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
               "traits": {
                  "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
               }
            }
         },
          "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
```

```
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n <p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}

    }
     },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
        "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the user.</p>"
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based subscriptions.</p>"
            }
        },
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
            }
```

```
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
                  "min": 1
                },

    "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Filter": {
          "type": "structure",
          "members": {
            "Attribute": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
              }
            },
            "Operation": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
              }
            },
            "Value": {
              "target": "smithy.api#String",
              "traits":
{
                "smithy.api#documentation": "<p>Value of the filter.</p>"
              }
            }
```

```
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
```

```
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
```

```
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
```

```
"type": "service",
"version": "2018-05-10",
"operations": [
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
    },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
    },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
   },
   {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
   },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
            },
            {

    "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager User Subscriptions",
                "arnNamespace": "license-manager-user-subscriptions",
                "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
                "name": "license-manager-user-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
                "additionalAllowedHeaders": [
                    "*",
                    "content-type",
                    "x-amz-content-sha256",
                    "x-amz-user-agent",
                    "x-amzn-platform-id",
                    "x-amzn-trace-id",
                    "content-length",

             "x-api-key",
                    "authorization",
                    "x-amz-date",
                    "x-amz-security-token",
                    "Access-Control-Allow-Headers",
                    "Access-Control-Allow-Methods",
                    "Access-Control-Allow-Origin"
                ],
                "additionalExposedHeaders": [
                    "x-amzn-errortype",
                    "x-amzn-requestid",
                    "x-amzn-trace-id"
                ]
            },
            "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager User Subscriptions",
            "smithy.rules#endpointRuleSet": {
                "version": "1.0",
                "parameters": {
```

```
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
                    "type": "String"
                }
            },
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Endpoint"
                                }
                            ]
                        }
                     ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
```

```
                    "argv": [
                        {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
                }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
        },
        {
            "conditions": [
                {

                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": {
                    "ref": "Endpoint"
                },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "isSet",
                "argv": [
                    {
```

```
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

true

```
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
```

```
"fn": "booleanEquals",
                                    "argv": [
                                      true,
                                      {
                                        "fn": "getAttr",
                                        "argv": [
                                          {
                                            "ref": "PartitionResult"
                                          },
                                          "supportsFIPS"
                                        ]
                                      }
                                    ]
                                  },

                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                      true,
                                      {
                                        "fn": "getAttr",
                                        "argv": [
                                          {
                                            "ref": "PartitionResult"
                                          },
                                          "supportsDualStack"
                                        ]
                                      }

                              ]
                                  }
                                ],
                                "rules": [
                                  {
                                    "conditions": [],
                                    "endpoint": {
                                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                      "properties": {},
                                      "headers": {}
                                    },
                                    "type": "endpoint"
                                  }

  ],
                                "type": "tree"
                              },
                              {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [

 {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [

{
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

            "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

        }
                            ]
                        }
```

```
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }

                                ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                        "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
```

```
        "smithy.rules#endpointTests": {
          "testCases": [
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
              "expect":
{
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint":
```

```
{
                        "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS":
true,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint":
{
                        "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
```

```
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
           "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
           "UseDualStack": false
        }
```

```
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
 false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
```

```
                        "url": "https://example.com"
                    }
                },
                "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                    "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                }
            },
            {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                 }
            },
            {
                "documentation": "Missing region",
                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
            }
        ],
        "version": "1.0"
      }
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
    "type": "structure",
    "members": {
```

```
            "ProvisioningStatus": {
               "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
               "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
               }
            },
            "HealthStatus": {
               "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
               "traits": {
                  "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
               }
            },
            "Ipv4Address": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
               }
            },
            "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of license server.</p>"
               }
            },
            "ServerEndpoint": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
```

\n\t\t\taddress of the RDS license server endpoint. "
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": " The message associated with the provisioning status, if there is one. "
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": " The ID of the license server endpoint. "
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": " The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server. "
            }
          },
          "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
              "smithy.api#documentation": " The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint "
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": " An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint. "
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": " The timestamp when License Manager created the license server endpoint. "
            }
          }
        },
        "traits": {

```
            "smithy.api#documentation":
"<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "PROVISIONING",
                    "value": "PROVISIONING",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONING_FAILED",

                  "value": "PROVISIONING_FAILED",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONED",
                    "value": "PROVISIONED",
                    "documentation": ""
                },
                {
                    "name": "DELETING",
                    "value": "DELETING",
                    "documentation": ""
                },
                {
                    "name": "DELETION_FAILED",
                    "value": "DELETION_FAILED",
                    "documentation": ""
                },
                {
                    "name": "DELETED",
                    "value": "DELETED",
                    "documentation": ""
                }
```

```
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "HEALTHY",
                    "value": "HEALTHY",
                    "documentation": ""
                },
                {
                    "name": "UNHEALTHY",
                    "value": "UNHEALTHY",
                    "documentation": ""
                },
                {
                    "name": "NOT_APPLICABLE",
                    "value": "NOT_APPLICABLE",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
        "type": "structure",
        "members": {
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>",
                    "smithy.api#required": {}
                }
            },
            "ServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                    "smithy.api#required": {}
                }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
```

```
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                    "smithy.api#required": {}
                }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
 {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
                 "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {

   "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
```

```
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

        "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
```

```
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/user/ListUserAssociations"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
 "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {

           "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
```

```
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a product for this user.</p>",
            "smithy.api#required": {}
          }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
          }
        },
        "SubscriptionStartDate": {
          "target": "smithy.api#String",
          "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
          }
        },
        "SubscriptionEndDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The end date of a subscription.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
          }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                    "smithy.api#required": {}
                }
            },

        "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration \n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
```

```
      "traits": {
        "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
        "smithy.api#error": "client",
        "smithy.api#httpError": 404
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

     "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
```

```
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/StartProductSubscription"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
```

<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}

}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
"traits": {
"smithy.api#documentation": " The tags that apply to the product subscription. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
"type": "structure",
"members": {
"ProductUserSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the start product subscription
operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
},

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
          "smithy.api#http":
 {
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
```

```
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
```

```
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
```

```
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
```

```
"com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
    "type": "structure",
    "members": {
        "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
            }
        },
        "TagKeys": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
            "traits": {
                "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                 "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
    "type": "structure",
    "members": {},
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

},
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to update.</p>"
                }
            },
            "UpdateSettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
                "traits": {
                    "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n<ul>\n            <li>\n                <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n            <li>\n                <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
```

\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
"traits": {
"smithy.api#documentation": " The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers. ",
"smithy.api#required":
{}
}
},
"RemoveSubnets": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
"traits": {
"smithy.api#documentation": " The ID of one or more subnets to remove. ",
"smithy.api#required": {}
}
},
"SecurityGroupId": {
"target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
"traits": {
"smithy.api#documentation": " A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers. "

```
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
      }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }
```

```
 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err =
 addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
```

DeleteLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

```
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
```

```
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
```

```
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:
      region,
 ServiceID:     ServiceID,
 OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType
```

```
// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
// This member is required.
ClientToken *string

// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string
```

```
// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
```

```
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
```

```
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData
```

```
// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
```

```
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
```

```
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
```

```
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
```

```
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
```

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER

```
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
```

```
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
```

InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
```

```
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

           "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
```

```
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",
```

```
    "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
        },
        "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
```

```
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for \n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
     },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
       "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
```

```
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
```

```
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }

        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]

}
                    ],
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                    "type": "error"
                  },
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": {
                        "ref": "Endpoint"
```

```
                    },
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
```

```
                "ref": "UseFIPS"
                    },
                    true
                ]
                },
                {
                "fn": "booleanEquals",
                "argv": [
                    {
                    "ref": "UseDualStack"
                    },
                    true
                ]
                }

],
            "rules": [
                {
                "conditions": [
                    {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                        "fn": "getAttr",
                        "argv": [
                            {
                            "ref": "PartitionResult"

},
                            "supportsFIPS"
                        ]
                        }
                    ]
                    },
                    {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                        "fn": "getAttr",
                        "argv": [

                        {
                            "ref": "PartitionResult"
                        },
                        "supportsDualStack"
```

```
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],

    "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {

                "fn": "booleanEquals",
                        "argv": [
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          },
                          true

                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "rules": [
                        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

  "properties": {},
                            "headers": {}
                          },
                          "type": "endpoint"
                        }
                      ],
                      "type": "tree"
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "FIPS is enabled
but this partition does not support FIPS",
                  "type": "error"
```

```
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true

    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {

                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

{
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
```

```
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"

                }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    }
],
"type": "tree"
```

```
      }
    ]
  },
  "smithy.rules#endpointTests": {
    "testCases": [
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

    }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {

     "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
```

```
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                    }

            },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                }
            },
            {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                    }
                 },
                "params": {
```

```
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
        },
        "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

     },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
```

```
        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                 "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

        "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "Missing region",

          "expect": {
              "error": "Invalid Configuration: Missing Region"
            }
          }
        ],
        "version": "1.0"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
          <li>\n              <p>\n                <code>DualSubscription</code>\n              </p>\n            </li>\n
```

\n \n <code>InstanceID</code>\n \n \n \n \n <code>InstanceType</code>\n \n \n \n \n <code>ProductCode</code>\n \n \n \n \n <code>Region</code>\n \n \n \n \n <code>Status</code>\n \n \n \n \n <code>UsageOperation</code>\n \n \n \n For each filter, you can use one of the following <code>Operator</code> values to \n \t\tdefine the behavior of the filter: \n \n \n \n <code>contains</code>\n \n \n \n \n <code>equals</code>\n \n \n \n \n <code>Notequal</code>\n \n \n "
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": " The maximum items to return in a request. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response. ",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": " An array that contains instance objects. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The next token used for paginated responses. When this \n\tfield

isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional
objects. "
}
}
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
},
"errors": [
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
},
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
},
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
}
],
"traits": {
"smithy.api#documentation":
" Lists the Linux subscriptions that have been discovered. If you have linked your\n organization, the returned results will include data aggregated across your accounts in\n Organizations. ",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/subscription/ListLinuxSubscriptions"
},
"smithy.api#idempotent": {},
"smithy.api#paginated": {
"inputToken": "NextToken",
"outputToken": "NextToken",
"pageSize": "MaxResults",
"items": "Subscriptions"
}
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
"type": "structure",
"members": {
"Filters": {

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
              "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
```

```
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
```

```
the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
```

```
        }
      }
    },
    "traits": {
      "smithy.api#input": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
```

```
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

              "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
```

\n\t\t\tthis is the status of the offline token. "
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
            }
          }
        },
        "traits": {
          "smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": " Unable to find the requested Amazon Web Services resource. ",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-

```
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
            },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            }
          }
        },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          },
          "smithy.api#uniqueItems": {}
        }
```

```
},
"com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
   "type": "map",
   "key": {
      "target": "smithy.api#String"
   },
   "value": {
      "target": "smithy.api#String"
   }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
   "type": "structure",
   "members": {
      "Name": {
         "target": "smithy.api#String",
         "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
         }
      },
      "Type": {
         "target": "smithy.api#String",
         "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with
Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace.
Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing
from Amazon EC2 or BYOS.</p>"
            }
         },
         "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
               "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
         }
      },
      "traits": {
         "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
   },
   "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

    "member": {
         "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
   },
   "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
```

```
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "ACTIVE",
              "value": "ACTIVE",
              "documentation": "ACTIVE status"
            },
            {
              "name": "INVALID",
              "value": "INVALID",
              "documentation": "INVALID status"
            },
            {
              "name": "PENDING",
              "value": "PENDING",
              "documentation": "PENDING status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
```

```
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
{}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
```

```
from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
             }
          }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
              "message": {
                  "target": "smithy.api#String"
              }
          },
          "traits": {
              "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
              "smithy.api#error": "client"
          }
      }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or

agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning

Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.110 x-sys 0.35.0

1.110.1 Available under license :

Copyright 2009 The Go Authors.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google LLC nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY

THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.111 prometheus-common 0.65.0

1.111.1 Available under license :

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses

granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,

any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

1.112 go-jose-go-jose 3.0.4

1.112.1 Available under license :

Copyright (c) 2012 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a

copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a

cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with

the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability

incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

1.113 prometheus-client 1.23.0

1.113.1 Available under license :

Copyright (c) 2013 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from

this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Prometheus instrumentation library for Go applications
Copyright 2012-2015 The Prometheus Authors

This product includes software developed at
SoundCloud Ltd. (http://soundcloud.com/).

The following components are included in this product:

perks - a fork of https://github.com/bmizerany/perks
https://github.com/beorn7/perks
Copyright 2013-2015 Blake Mizerany, Bjrn Rabenstein
See https://github.com/beorn7/perks/blob/master/README.md for license details.

Go support for Protocol Buffers - Google's data interchange format
http://github.com/golang/protobuf/
Copyright 2010 The Go Authors
See source code for license details.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common

control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity

on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained

within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,

whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and

limitations under the License.

1.114 ssl-client 1.37.0-r13

1.114.1 Available under license :

```
# Automatically generated by apkbuild-cpan, template 4
# Contributor: Valery Kartel <valery.kartel@gmail.com>
# Maintainer: Celeste <cielesti@protonmail.com>
maintainer="Celeste <cielesti@protonmail.com>"
pkgname=perl-bsd-resource
pkgver=1.2911
pkgrel=10
#_pkgreal is used by apkbuild-cpan to find modules at MetaCpan
_pkgreal=BSD-Resource
pkgdesc="Perl extension implements the BSD process resource limit functions"
url="https://metacpan.org/release/BSD-Resource/"
arch="all"
license="Artistic-2.0 OR LGPL-2.0"
depends="perl"
makedepends="perl-dev"
subpackages="$pkgname-doc"
source="https://cpan.metacpan.org/authors/id/J/JH/JHI/BSD-Resource-$pkgver.tar.gz"
builddir="$srcdir/$_pkgreal-$pkgver"

build() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 PERL_MM_USE_DEFAULT=1 perl -I. Makefile.PL \
  INSTALLDIRS=vendor \
  NO_PACKLIST=1 \
  NO_PERLLOCAL=1
 make
}

check() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 make test
}

package() {
 make DESTDIR="$pkgdir" install
}

sha512sums="
d0032d41c7c0468ed1c6d8f57b885f6cb97a5039d754c8cb60b2067daedaf53bd15fb6561a3d0f828df16dfa5417f663b
8065ba65f4fea16dc9262728b3b6b85
  BSD-Resource-1.2911.tar.gz
"
```

bzip2 applet in busybox is based on lightly-modified source
of bzip2 version 1.0.4. bzip2 source is distributed
under the following conditions (copied verbatim from LICENSE file)
==========

This program, "bzip2", the associated library "libbzip2", and all
documentation, are copyright (C) 1996-2006 Julian R Seward. All
rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

2. The origin of this software must not be misrepresented; you must
not claim that you wrote the original software. If you use this
software in a product, an acknowledgment in the product
documentation would be appreciated but is not required.

3. Altered source versions must be plainly marked as such, and must
not be misrepresented
as being the original software.

4. The name of the author may not be used to endorse or promote
products derived from this software without specific prior written
permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, Cambridge, UK.
jseward@bzip.org
bzip2/libbzip2 version 1.0.4 of 20 December 2006
--- A note on GPL versions

BusyBox is distributed under version 2 of the General Public License (included

in its entirety, below). Version 2 is the only version of this license which this version of BusyBox (or modified versions derived from this one) may be distributed under.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's
software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for
a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and

you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed
under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the
executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make
exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR

REDISTRIBUTE THE PROGRAM AS PERMITTED
ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author

```
  Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
  This is free software, and you are welcome to redistribute it
  under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of
 Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

```
# Contributor: Maxim Karasev <begs@disroot.org>
# Maintainer: mio <miyopan@e.email>
pkgname=bsd-games
pkgver=3.3
pkgrel=2
pkgdesc="traditional text mode games from BSD"
url="https://bsd-games.sourceforge.io/"
arch="all"
license="BSD-3-Clause"
install="$pkgname.post-install"
makedepends="ncurses-dev coreutils" # configure causes busybox expr error
subpackages="$pkgname-doc"
source="https://sourceforge.net/projects/bsd-games/files/bsd-games-$pkgver.tar.gz
 0001-bsd-games-scores-dir.patch
 "
options="!check" # no tests

build() {
 # some GNU autoconf options are ignored, but it works
 ./configure \
  --build=$CBUILD \
  --host=$CHOST \
  --prefix=/usr \
```

```
  --sysconfdir=/etc \
  --mandir=/usr/share/man \
  --scoredir=/usr/share/$pkgname
 make
}

package() {
 make DESTDIR="$pkgdir" install
 install -Dm644 LICENSE "$pkgdir"/usr/share/licenses/bsd-games/LICENSE
}

sha512sums="
aaf36d09d4fe68514a5c279063d7e77a9a9a84c447037cba974b29faa07eb80c2aab2379d0699c196b5c27ffe1b2bb2c6
8d3390143e0e62d5e3d210ccfb61294
  bsd-games-3.3.tar.gz
e1def0d4835a877242c4173fae862e278a7858738e0bacacbb045a42bcabec2aa7c72d000bbd2421ce35fe66cdc1f52c0
577b7e278029ca5ed50f7aab22319f6  0001-bsd-games-scores-dir.patch
"
```

MIT License

Copyright (c) 2023 Leaf Corcoran

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION
 WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
 Vintage Dreams Waves v 2.0. for Creative Labs' AWE Soundcards
(EMU Soundfont 2 Format)

Copyright (c) Ian Wilson, 1996 (Updated January 1998)

This soundfont is freeware. You may freely use and/or redistribute it subject
to the following terms:
1. It is not altered, edited, modified, ripped, or converted to other formats,

except for private use only.
2. It is distributed with this copyright notice.

This soundfont is distributed WITHOUT WARRANTY, and without the implied
warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. No liability
or damages can be inferred upon the said copyright owner, Ian Wilson.

Any feedback, contact Ian Wilson.
vintagedreamworks@hotmail.com
http://www.geocities.com/SiliconValley/Campus/8645/index.html
http://members.nbci.com/silicon39/
http://www.mp3.com/silicon39
https://analoguesque.x10host.com/
Contributor: Carlo Landmeter <clandmeter@alpinelinux.org>
Maintainer: Kevin Daudt <kdaudt@alpinelinux.org>
pkgname=spdx-licenses
pkgver=3.24.0
pkgrel=0
pkgdesc="Various data formats for the SPDX License List"
url="https://spdx.org/"
arch="noarch"
options="!check" # no test suite
license="CC-BY-3.0"
source="license-list-data-$pkgver.tar.gz::https://github.com/spdx/license-list-data/archive/v$pkgver.tar.gz"
builddir="$srcdir/license-list-data-$pkgver"
subpackages="$pkgname-list"

_types="html json rdfa rdfnt rdfturtle rdfxml template text"

for type in $_types; do
 subpackages="$subpackages $pkgname-$type:_subpkg"
done

package() {
 mkdir -p "$pkgdir"
}

_subpkg() {
 local type=${subpkgname/$pkgname-/}
 pkgdesc="$pkgdesc ($type)"
 install_if="$pkgname=$pkgver-r$pkgrel"
 mkdir -p "$subpkgdir"/usr/share/spdx
 cp -r "$builddir"/$type "$subpkgdir"/usr/share/spdx/
}

list() {
 pkgdesc="$pkgdesc (licence list)"
 mkdir -p "$subpkgdir"/usr/share/spdx

```
 local i; for i in "$builddir"/text/*.txt;
 do
  local license=${i##*/}
  echo ${license%.*} >> "$subpkgdir"/usr/share/spdx/license.lst
 done
}

sha512sums="
6eb81424e1b3173dbd8e17859b2e15dfe1c2af8f4da59b7dad0729c038a4cbdba95c34c2c546285fcdbbd41562e39575e
6a6ebb9463b70121e0a12b99d1307e7  license-list-data-3.24.0.tar.gz
"
# Maintainer: Natanael Copa <ncopa@alpinelinux.org>
pkgname=libart-lgpl
pkgver=2.3.21
pkgrel=8
pkgdesc="A library for high-performance 2D graphics"
url="https://www.levien.com/libart/"
arch="all"
options="!check"  # No test suite.
license="LGPL-2.0-or-later"
subpackages="$pkgname-dev"
source="https://download.gnome.org/sources/libart_lgpl/2.3/libart_lgpl-$pkgver.tar.bz2
 "

builddir="$srcdir"/libart_lgpl-$pkgver

prepare() {
 update_config_sub
 default_prepare
}

build() {
 ./configure \
  --build=$CBUILD \
  --host=$CHOST \
  --prefix=/usr
 make
}

package() {
 make DESTDIR="$pkgdir" install
}

sha512sums="8a632a6a4da59e5e8c02ec2f5a57e36d182b325b46513765425e5f171ff9ae326af1b133725beba28f7e7
6654309e001aee9bace727b5b4c8589405256a3c020  libart_lgpl-2.3.21.tar.bz2"
mini_sendmail - accept email on behalf of real sendmail

Copyright  1999,2015 by Jef Poskanzer <jef@mail.acme.com>.
```

All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING,
 BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.
Contributor: Patrycja Rosa <alpine@ptrcnull.me>
Maintainer: Patrycja Rosa <alpine@ptrcnull.me>
pkgname=bsd-compat-headers
pkgver=0.7.2
pkgrel=6
pkgdesc="BSD compatibility headers (cdefs, queue, tree)"
url="https://gitlab.alpinelinux.org/alpine/aports"
arch="noarch"
license="BSD-2-Clause AND BSD-3-Clause"
source="
 cdefs.h
 queue.h
 tree.h
"
builddir="$srcdir"
options="!check" # just headers

package() {
 mkdir -p "$pkgdir"
 install -Dm644 -t "$pkgdir"/usr/include/sys \
  cdefs.h queue.h tree.h
}
sha512sums="
37c8fc73c7aea7b490f7850927e2bb91d12137c9e59e22c084146d515696dbc7973b5de92f4c987ba080dd2502ba8312
7006442c3f019b6447a620c0cae73178 cdefs.h

2f0d5e6e4dc3350285cf17009265dddcbe12431c111868eea39bc8cb038ab7c1f2acacbb21735c4e9d4a1fd106a8fc0f86
11ea33987d4faba37dde5ce6da0750 queue.h
d9ac210d81feb8ad2655bc80fb065d3fe20ae4417b32b4a1711e6738a4870140005c13373b5d1846ef3ce5ae6da45f2da
cef2092881eded0a2e94f6a07752ef3 tree.h
"

Original Copyright (c) 1985 by Supoj Sutanthavibul
Parts Copyright (c) 1989-2012 by Brian V. Smith
Parts Copyright (c) 1991 by Paul King
Other Copyrights may be found in various files

Main Xfig copyright notice:

Any party obtaining a copy of these files is granted, free of charge, a full and unrestricted irrevocable, world-wide, paid up, royalty-free, nonexclusive right and license to deal in this software and documentation files (the "Software"), including without limitation the rights to use, copy, modify, merge, publish and/or distribute copies of the Software, and to permit persons who receive copies from any such party to do so, with the only requirement being that this copyright notice remain intact.

No representations are made about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

Parts Copyright (C) 1993 by Alan Richardson (mppa3@uk.ac.sussex.syma)
The text rotation code in w_rottext.c was written by Alan Richardson.
 The above copyright notice holds for this work as well.

Parts Copyright (c) 1994 by Anthony Dekker
The Kohonen neural network code for color optimization was written by Anthony Dekker.

Parts Copyright (c) 1995 by C. Blanc and C. Schlick
The X-Spline code was written Carole Blanc (blanc@labri.u-bordeaux.fr) and Christophe Schlick (schlick@labri.u-bordeaux.fr) starting from an initial implementation done by C. Feuille, S. Grosbois, L. Maziere and L. Minihot as a student practice (Universite Bordeaux, France). For additional information about X-splines, see:
"X-Splines: A Spline Model Designed for the End User" by C. Blanc and C. Schlick, Proceedings of SIGGRAPH'95
http://dept-info.labri.u-bordeaux.fr/~schlick/DOC/sig1.html
/* $NetBSD: queue.h,v 1.70 2015/11/02 15:21:23 christos Exp $ */

/*
* Copyright (c) 1991, 1993
* The Regents of the University of California. All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the above copyright
*   notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following disclaimer in the
*   documentation and/or other materials provided with the distribution.

```
* 3. Neither the name of the University nor the names of its contributors
*    may be used to endorse or promote products derived from this software
*    without specific prior written permission.
*
* THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING,
 BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
* SUCH DAMAGE.
*
* @(#)queue.h 8.5 (Berkeley) 8/20/94
*/

#ifndef _SYS_QUEUE_H_
#define _SYS_QUEUE_H_

/*
* This file defines five types of data structures: singly-linked lists,
* lists, simple queues, tail queues, and circular queues.
*
* A singly-linked list is headed by a single forward pointer. The
* elements are singly linked for minimum space and
 pointer manipulation
* overhead at the expense of O(n) removal for arbitrary elements. New
* elements can be added to the list after an existing element or at the
* head of the list.  Elements being removed from the head of the list
* should use the explicit macro for this purpose for optimum
* efficiency. A singly-linked list may only be traversed in the forward
* direction.  Singly-linked lists are ideal for applications with large
* datasets and few or no removals or for implementing a LIFO queue.
*
* A list is headed by a single forward pointer (or an array of forward
* pointers for a hash table header). The elements are doubly linked
* so that an arbitrary element can be removed without a need to
* traverse the list. New elements can be added to the list before
* or after an existing element or at the head of the list. A list
* may only be traversed in the forward direction.
*
* A simple queue is headed by a pair of pointers, one the head of the
* list and the
```

```
 other to the tail of the list. The elements are singly
* linked to save space, so elements can only be removed from the
* head of the list. New elements can be added to the list after
* an existing element, at the head of the list, or at the end of the
* list. A simple queue may only be traversed in the forward direction.
*
* A tail queue is headed by a pair of pointers, one to the head of the
* list and the other to the tail of the list. The elements are doubly
* linked so that an arbitrary element can be removed without a need to
* traverse the list. New elements can be added to the list before or
* after an existing element, at the head of the list, or at the end of
* the list. A tail queue may be traversed in either direction.
*
* A circle queue is headed by a pair of pointers, one to the head of the
* list and the other to the tail of the list. The elements are doubly
* linked so that an arbitrary element can be removed without a need to
* traverse the list. New elements
 can be added to the list before or after
* an existing element, at the head of the list, or at the end of the list.
* A circle queue may be traversed in either direction, but has a more
* complex end of list detection.
*
* For details on the use of these macros, see the queue(3) manual page.
*/

/*
* Include the definition of NULL only on NetBSD because sys/null.h
* is not available elsewhere.  This conditional makes the header
* portable and it can simply be dropped verbatim into any system.
* The caveat is that on other systems some other header
* must provide NULL before the macros can be used.
*/
#ifdef __NetBSD__
#include <sys/null.h>
#endif

#if defined(QUEUEDEBUG)
# if defined(_KERNEL)
#  define QUEUEDEBUG_ABORT(...) panic(__VA_ARGS__)
# else
#  include <err.h>
#  define QUEUEDEBUG_ABORT(...) err(1, __VA_ARGS__)
# endif
#endif

/*
* Singly-linked List definitions.
*/
```

```
#define SLIST_HEAD(name, type)      \
struct name {       \
 struct type *slh_first; /* first
 element */   \
}

#define SLIST_HEAD_INITIALIZER(head)     \
 { NULL }

#define SLIST_ENTRY(type)      \
struct {       \
 struct type *sle_next; /* next element */   \
}

/*
* Singly-linked List access methods.
*/
#define SLIST_FIRST(head) ((head)->slh_first)
#define SLIST_END(head)  NULL
#define SLIST_EMPTY(head) ((head)->slh_first == NULL)
#define SLIST_NEXT(elm, field) ((elm)->field.sle_next)

#define SLIST_FOREACH(var, head, field)     \
 for((var) = (head)->slh_first;     \
    (var) != SLIST_END(head);     \
    (var) = (var)->field.sle_next)

#define SLIST_FOREACH_SAFE(var, head, field, tvar)   \
 for ((var) = SLIST_FIRST((head));    \
    (var) != SLIST_END(head) &&     \
    ((tvar) = SLIST_NEXT((var), field), 1);   \
    (var) = (tvar))

/*
* Singly-linked List functions.
*/
#define SLIST_INIT(head) do {      \
 (head)->slh_first = SLIST_END(head);    \
} while (/*CONSTCOND*/0)

#define SLIST_INSERT_AFTER(slistelm, elm, field) do {   \
 (elm)->field.sle_next = (slistelm)->field.sle_next;  \
 (slistelm)->field.sle_next
 = (elm);    \
} while (/*CONSTCOND*/0)

#define SLIST_INSERT_HEAD(head, elm, field) do {   \
 (elm)->field.sle_next = (head)->slh_first;   \
```

```
 (head)->slh_first = (elm);     \
} while (/*CONSTCOND*/0)

#define SLIST_REMOVE_AFTER(slistelm, field) do {   \
 (slistelm)->field.sle_next =     \
    SLIST_NEXT(SLIST_NEXT((slistelm), field), field);  \
} while (/*CONSTCOND*/0)

#define SLIST_REMOVE_HEAD(head, field) do {    \
 (head)->slh_first = (head)->slh_first->field.sle_next;  \
} while (/*CONSTCOND*/0)

#define SLIST_REMOVE(head, elm, type, field) do {   \
 if ((head)->slh_first == (elm)) {    \
  SLIST_REMOVE_HEAD((head), field);   \
 }       \
 else {       \
  struct type *curelm = (head)->slh_first;  \
  while(curelm->field.sle_next != (elm))   \
   curelm = curelm->field.sle_next;  \
  curelm->field.sle_next =    \
      curelm->field.sle_next->field.sle_next;  \
 }       \
} while (/*CONSTCOND*/0)


/*
* List definitions.
 */
#define LIST_HEAD(name, type)      \
struct name {       \
 struct type *lh_first; /* first element */   \
}

#define LIST_HEAD_INITIALIZER(head)     \
 { NULL }

#define LIST_ENTRY(type)      \
struct {       \
 struct type *le_next; /* next element */   \
 struct type **le_prev; /* address of previous next element */ \
}

/*
* List access methods.
*/
#define LIST_FIRST(head)  ((head)->lh_first)
#define LIST_END(head)   NULL
```

```
#define LIST_EMPTY(head)  ((head)->lh_first == LIST_END(head))
#define LIST_NEXT(elm, field)  ((elm)->field.le_next)

#define LIST_FOREACH(var, head, field)     \
 for ((var) = ((head)->lh_first);    \
     (var) != LIST_END(head);     \
     (var) = ((var)->field.le_next))

#define LIST_FOREACH_SAFE(var, head, field, tvar)   \
 for ((var) = LIST_FIRST((head));    \
     (var) != LIST_END(head) &&     \
     ((tvar) = LIST_NEXT((var), field), 1);   \
     (var) = (tvar))

#define LIST_MOVE(head1, head2) do {     \
 LIST_INIT((head2));      \
 if (!LIST_EMPTY((head1)))
 {     \
  (head2)->lh_first = (head1)->lh_first;   \
  LIST_INIT((head1));     \
 }       \
} while (/*CONSTCOND*/0)

/*
* List functions.
*/
#if defined(QUEUEDEBUG)
#define QUEUEDEBUG_LIST_INSERT_HEAD(head, elm, field)   \
 if ((head)->lh_first &&      \
     (head)->lh_first->field.le_prev != &(head)->lh_first) \
  QUEUEDEBUG_ABORT("LIST_INSERT_HEAD %p %s:%d", (head), \
      __FILE__, __LINE__);
#define QUEUEDEBUG_LIST_OP(elm, field)     \
 if ((elm)->field.le_next &&     \
     (elm)->field.le_next->field.le_prev !=   \
     &(elm)->field.le_next)     \
  QUEUEDEBUG_ABORT("LIST_* forw %p %s:%d", (elm),  \
      __FILE__, __LINE__);    \
 if (*(elm)->field.le_prev != (elm))    \
  QUEUEDEBUG_ABORT("LIST_* back %p %s:%d", (elm),  \
      __FILE__, __LINE__);
#define QUEUEDEBUG_LIST_POSTREMOVE(elm, field)    \
 (elm)->field.le_next = (void *)1L;    \
 (elm)->field.le_prev = (void *)1L;
#else
#define QUEUEDEBUG_LIST_INSERT_HEAD(head, elm, field)
#define QUEUEDEBUG_LIST_OP(elm,
```

```
 field)
#define QUEUEDEBUG_LIST_POSTREMOVE(elm, field)
#endif

#define LIST_INIT(head) do {      \
 (head)->lh_first = LIST_END(head);    \
} while (/*CONSTCOND*/0)

#define LIST_INSERT_AFTER(listelm, elm, field) do {   \
 QUEUEDEBUG_LIST_OP((listelm), field)    \
 if (((elm)->field.le_next = (listelm)->field.le_next) !=  \
     LIST_END(head))      \
  (listelm)->field.le_next->field.le_prev =  \
      &(elm)->field.le_next;    \
 (listelm)->field.le_next = (elm);    \
 (elm)->field.le_prev = &(listelm)->field.le_next;  \
} while (/*CONSTCOND*/0)

#define LIST_INSERT_BEFORE(listelm, elm, field) do {   \
 QUEUEDEBUG_LIST_OP((listelm), field)    \
 (elm)->field.le_prev = (listelm)->field.le_prev;  \
 (elm)->field.le_next = (listelm);    \
 *(listelm)->field.le_prev = (elm);    \
 (listelm)->field.le_prev = &(elm)->field.le_next;  \
} while (/*CONSTCOND*/0)

#define LIST_INSERT_HEAD(head, elm, field) do {    \
 QUEUEDEBUG_LIST_INSERT_HEAD((head), (elm), field)  \
 if (((elm)->field.le_next
 = (head)->lh_first) != LIST_END(head))\
  (head)->lh_first->field.le_prev = &(elm)->field.le_next;\
 (head)->lh_first = (elm);     \
 (elm)->field.le_prev = &(head)->lh_first;   \
} while (/*CONSTCOND*/0)

#define LIST_REMOVE(elm, field) do {     \
 QUEUEDEBUG_LIST_OP((elm), field)    \
 if ((elm)->field.le_next != NULL)    \
  (elm)->field.le_next->field.le_prev =    \
      (elm)->field.le_prev;    \
 *(elm)->field.le_prev = (elm)->field.le_next;   \
 QUEUEDEBUG_LIST_POSTREMOVE((elm), field)   \
} while (/*CONSTCOND*/0)

#define LIST_REPLACE(elm, elm2, field) do {    \
 if (((elm2)->field.le_next = (elm)->field.le_next) != NULL) \
  (elm2)->field.le_next->field.le_prev =   \
      &(elm2)->field.le_next;    \
```

```
 (elm2)->field.le_prev = (elm)->field.le_prev;   \
 *(elm2)->field.le_prev = (elm2);    \
 QUEUEDEBUG_LIST_POSTREMOVE((elm), field)   \
} while (/*CONSTCOND*/0)

/*
* Simple queue definitions.
*/
#define SIMPLEQ_HEAD(name, type)     \
struct name {        \
 struct
 type *sqh_first; /* first element */   \
 struct type **sqh_last; /* addr of last next element */  \
}

#define SIMPLEQ_HEAD_INITIALIZER(head)     \
 { NULL, &(head).sqh_first }

#define SIMPLEQ_ENTRY(type)      \
struct {        \
 struct type *sqe_next; /* next element */   \
}

/*
* Simple queue access methods.
*/
#define SIMPLEQ_FIRST(head)  ((head)->sqh_first)
#define SIMPLEQ_END(head)  NULL
#define SIMPLEQ_EMPTY(head)  ((head)->sqh_first == SIMPLEQ_END(head))
#define SIMPLEQ_NEXT(elm, field) ((elm)->field.sqe_next)

#define SIMPLEQ_FOREACH(var, head, field)    \
 for ((var) = ((head)->sqh_first);    \
     (var) != SIMPLEQ_END(head);     \
     (var) = ((var)->field.sqe_next))

#define SIMPLEQ_FOREACH_SAFE(var, head, field, next)   \
 for ((var) = ((head)->sqh_first);    \
     (var) != SIMPLEQ_END(head) &&    \
     ((next = ((var)->field.sqe_next)), 1);   \
     (var) = (next))

/*
* Simple queue functions.
*/
#define SIMPLEQ_INIT(head) do {      \
 (head)->sqh_first = NULL;     \
 (head)->sqh_last
```

```
 = &(head)->sqh_first;    \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_INSERT_HEAD(head, elm, field) do {   \
 if (((elm)->field.sqe_next = (head)->sqh_first) == NULL) \
  (head)->sqh_last = &(elm)->field.sqe_next;  \
 (head)->sqh_first = (elm);     \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_INSERT_TAIL(head, elm, field) do {   \
 (elm)->field.sqe_next = NULL;     \
 *(head)->sqh_last = (elm);     \
 (head)->sqh_last = &(elm)->field.sqe_next;   \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_INSERT_AFTER(head, listelm, elm, field) do {  \
 if (((elm)->field.sqe_next = (listelm)->field.sqe_next) == NULL)\
  (head)->sqh_last = &(elm)->field.sqe_next;  \
 (listelm)->field.sqe_next = (elm);    \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_REMOVE_HEAD(head, field) do {    \
 if (((head)->sqh_first = (head)->sqh_first->field.sqe_next) == NULL) \
  (head)->sqh_last = &(head)->sqh_first;   \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_REMOVE_AFTER(head, elm, field) do {   \
 if
 (((elm)->field.sqe_next = (elm)->field.sqe_next->field.sqe_next) \
    == NULL)       \
  (head)->sqh_last = &(elm)->field.sqe_next;  \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_REMOVE(head, elm, type, field) do {   \
 if ((head)->sqh_first == (elm)) {    \
  SIMPLEQ_REMOVE_HEAD((head), field);   \
 } else {       \
  struct type *curelm = (head)->sqh_first;  \
  while (curelm->field.sqe_next != (elm))   \
   curelm = curelm->field.sqe_next;  \
  if ((curelm->field.sqe_next =    \
   curelm->field.sqe_next->field.sqe_next) == NULL) \
      (head)->sqh_last = &(curelm)->field.sqe_next; \
 }       \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_CONCAT(head1, head2) do {    \
 if (!SIMPLEQ_EMPTY((head2))) {     \
```

```
  *(head1)->sqh_last = (head2)->sqh_first;  \
  (head1)->sqh_last = (head2)->sqh_last;  \
  SIMPLEQ_INIT((head2));     \
 }       \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_LAST(head, type, field)     \
 (SIMPLEQ_EMPTY((head)) ?      \
  NULL :       \
        ((struct type
 *)(void *)    \
  ((char *)((head)->sqh_last) - offsetof(struct type, field))))

/*
* Tail queue definitions.
*/
#define _TAILQ_HEAD(name, type, qual)     \
struct name {        \
 qual type *tqh_first;  /* first element */  \
 qual type *qual *tqh_last; /* addr of last next element */ \
}
#define TAILQ_HEAD(name, type) _TAILQ_HEAD(name, struct type,)

#define TAILQ_HEAD_INITIALIZER(head)     \
 { TAILQ_END(head), &(head).tqh_first }

#define _TAILQ_ENTRY(type, qual)     \
struct {        \
 qual type *tqe_next;  /* next element */  \
 qual type *qual *tqe_prev; /* address of previous next element */\
}
#define TAILQ_ENTRY(type) _TAILQ_ENTRY(struct type,)

/*
* Tail queue access methods.
*/
#define TAILQ_FIRST(head)  ((head)->tqh_first)
#define TAILQ_END(head)   (NULL)
#define TAILQ_NEXT(elm, field)  ((elm)->field.tqe_next)
#define TAILQ_LAST(head, headname) \
 (*(((struct headname *)(void *)((head)->tqh_last))->tqh_last))
#define TAILQ_PREV(elm, headname, field) \
 (*(((struct headname
 *)(void *)((elm)->field.tqe_prev))->tqh_last))
#define TAILQ_EMPTY(head)  (TAILQ_FIRST(head) == TAILQ_END(head))


#define TAILQ_FOREACH(var, head, field)     \
```

```
 for ((var) = ((head)->tqh_first);    \
    (var) != TAILQ_END(head);     \
    (var) = ((var)->field.tqe_next))

#define TAILQ_FOREACH_SAFE(var, head, field, next)   \
 for ((var) = ((head)->tqh_first);    \
    (var) != TAILQ_END(head) &&     \
    ((next) = TAILQ_NEXT(var, field), 1); (var) = (next))

#define TAILQ_FOREACH_REVERSE(var, head, headname, field)  \
 for ((var) = TAILQ_LAST((head), headname);   \
    (var) != TAILQ_END(head);     \
    (var) = TAILQ_PREV((var), headname, field))

#define TAILQ_FOREACH_REVERSE_SAFE(var, head, headname, field, prev) \
 for ((var) = TAILQ_LAST((head), headname);   \
    (var) != TAILQ_END(head) &&     \
    ((prev) = TAILQ_PREV((var), headname, field), 1); (var) = (prev))

/*
* Tail queue functions.
*/
#if defined(QUEUEDEBUG)
#define QUEUEDEBUG_TAILQ_INSERT_HEAD(head,
 elm, field)   \
 if ((head)->tqh_first &&     \
    (head)->tqh_first->field.tqe_prev != &(head)->tqh_first) \
  QUEUEDEBUG_ABORT("TAILQ_INSERT_HEAD %p %s:%d", (head), \
      __FILE__, __LINE__);
#define QUEUEDEBUG_TAILQ_INSERT_TAIL(head, elm, field)   \
 if (*(head)->tqh_last != NULL)     \
  QUEUEDEBUG_ABORT("TAILQ_INSERT_TAIL %p %s:%d", (head), \
      __FILE__, __LINE__);
#define QUEUEDEBUG_TAILQ_OP(elm, field)     \
 if ((elm)->field.tqe_next &&     \
    (elm)->field.tqe_next->field.tqe_prev !=   \
    &(elm)->field.tqe_next)     \
  QUEUEDEBUG_ABORT("TAILQ_* forw %p %s:%d", (elm), \
      __FILE__, __LINE__);    \
 if (*(elm)->field.tqe_prev != (elm))    \
  QUEUEDEBUG_ABORT("TAILQ_* back %p %s:%d", (elm), \
      __FILE__, __LINE__);
#define QUEUEDEBUG_TAILQ_PREREMOVE(head, elm, field)   \
 if ((elm)->field.tqe_next == NULL &&    \
    (head)->tqh_last != &(elm)->field.tqe_next)   \
  QUEUEDEBUG_ABORT("TAILQ_PREREMOVE head %p elm %p %s:%d",\
      (head), (elm), __FILE__,
```

```
 __LINE__);
#define QUEUEDEBUG_TAILQ_POSTREMOVE(elm, field)    \
 (elm)->field.tqe_next = (void *)1L;    \
 (elm)->field.tqe_prev = (void *)1L;
#else
#define QUEUEDEBUG_TAILQ_INSERT_HEAD(head, elm, field)
#define QUEUEDEBUG_TAILQ_INSERT_TAIL(head, elm, field)
#define QUEUEDEBUG_TAILQ_OP(elm, field)
#define QUEUEDEBUG_TAILQ_PREREMOVE(head, elm, field)
#define QUEUEDEBUG_TAILQ_POSTREMOVE(elm, field)
#endif

#define TAILQ_INIT(head) do {      \
 (head)->tqh_first = TAILQ_END(head);    \
 (head)->tqh_last = &(head)->tqh_first;    \
} while (/*CONSTCOND*/0)

#define TAILQ_INSERT_HEAD(head, elm, field) do {   \
 QUEUEDEBUG_TAILQ_INSERT_HEAD((head), (elm), field)  \
 if (((elm)->field.tqe_next = (head)->tqh_first) != TAILQ_END(head))\
  (head)->tqh_first->field.tqe_prev =   \
     &(elm)->field.tqe_next;    \
 else       \
  (head)->tqh_last = &(elm)->field.tqe_next;  \
 (head)->tqh_first = (elm);     \
 (elm)->field.tqe_prev = &(head)->tqh_first;   \
} while (/*CONSTCOND*/0)

#define TAILQ_INSERT_TAIL(head,
 elm, field) do {   \
 QUEUEDEBUG_TAILQ_INSERT_TAIL((head), (elm), field)  \
 (elm)->field.tqe_next = TAILQ_END(head);   \
 (elm)->field.tqe_prev = (head)->tqh_last;   \
 *(head)->tqh_last = (elm);     \
 (head)->tqh_last = &(elm)->field.tqe_next;   \
} while (/*CONSTCOND*/0)

#define TAILQ_INSERT_AFTER(head, listelm, elm, field) do {  \
 QUEUEDEBUG_TAILQ_OP((listelm), field)    \
 if (((elm)->field.tqe_next = (listelm)->field.tqe_next) !=  \
    TAILQ_END(head))      \
  (elm)->field.tqe_next->field.tqe_prev =   \
     &(elm)->field.tqe_next;    \
 else       \
  (head)->tqh_last = &(elm)->field.tqe_next;  \
 (listelm)->field.tqe_next = (elm);    \
 (elm)->field.tqe_prev = &(listelm)->field.tqe_next;  \
} while (/*CONSTCOND*/0)
```

```
#define TAILQ_INSERT_BEFORE(listelm, elm, field) do {   \
 QUEUEDEBUG_TAILQ_OP((listelm), field)    \
 (elm)->field.tqe_prev = (listelm)->field.tqe_prev;  \
 (elm)->field.tqe_next = (listelm);    \
 *(listelm)->field.tqe_prev = (elm);    \
 (listelm)->field.tqe_prev
 = &(elm)->field.tqe_next;  \
} while (/*CONSTCOND*/0)

#define TAILQ_REMOVE(head, elm, field) do {    \
 QUEUEDEBUG_TAILQ_PREREMOVE((head), (elm), field)  \
 QUEUEDEBUG_TAILQ_OP((elm), field)    \
 if (((elm)->field.tqe_next) != TAILQ_END(head))   \
  (elm)->field.tqe_next->field.tqe_prev =   \
     (elm)->field.tqe_prev;    \
 else       \
  (head)->tqh_last = (elm)->field.tqe_prev;  \
 *(elm)->field.tqe_prev = (elm)->field.tqe_next;   \
 QUEUEDEBUG_TAILQ_POSTREMOVE((elm), field);   \
} while (/*CONSTCOND*/0)

#define TAILQ_REPLACE(head, elm, elm2, field) do {   \
      if (((elm2)->field.tqe_next = (elm)->field.tqe_next) !=  \
    TAILQ_END(head))        \
            (elm2)->field.tqe_next->field.tqe_prev =  \
               &(elm2)->field.tqe_next;    \
      else       \
            (head)->tqh_last = &(elm2)->field.tqe_next;  \
      (elm2)->field.tqe_prev = (elm)->field.tqe_prev;   \
      *(elm2)->field.tqe_prev = (elm2);    \
 QUEUEDEBUG_TAILQ_POSTREMOVE((elm),
 field);   \
} while (/*CONSTCOND*/0)

#define TAILQ_CONCAT(head1, head2, field) do {    \
 if (!TAILQ_EMPTY(head2)) {     \
  *(head1)->tqh_last = (head2)->tqh_first;  \
  (head2)->tqh_first->field.tqe_prev = (head1)->tqh_last; \
  (head1)->tqh_last = (head2)->tqh_last;   \
  TAILQ_INIT((head2));     \
 }       \
} while (/*CONSTCOND*/0)

/*
* Singly-linked Tail queue declarations.
*/
#define STAILQ_HEAD(name, type)      \
```

```
struct name {        \
 struct type *stqh_first; /* first element */  \
 struct type **stqh_last; /* addr of last next element */ \
}

#define STAILQ_HEAD_INITIALIZER(head)     \
 { NULL, &(head).stqh_first }

#define STAILQ_ENTRY(type)      \
struct {        \
 struct type *stqe_next; /* next element */   \
}

/*
* Singly-linked Tail queue access methods.
*/
#define STAILQ_FIRST(head) ((head)->stqh_first)
#define STAILQ_END(head) NULL
#define STAILQ_NEXT(elm, field) ((elm)->field.stqe_next)
#define STAILQ_EMPTY(head) (STAILQ_FIRST(head)
 == STAILQ_END(head))

/*
* Singly-linked Tail queue functions.
*/
#define STAILQ_INIT(head) do {      \
 (head)->stqh_first = NULL;     \
 (head)->stqh_last = &(head)->stqh_first;    \
} while (/*CONSTCOND*/0)

#define STAILQ_INSERT_HEAD(head, elm, field) do {   \
 if (((elm)->field.stqe_next = (head)->stqh_first) == NULL) \
  (head)->stqh_last = &(elm)->field.stqe_next;  \
 (head)->stqh_first = (elm);     \
} while (/*CONSTCOND*/0)

#define STAILQ_INSERT_TAIL(head, elm, field) do {   \
 (elm)->field.stqe_next = NULL;     \
 *(head)->stqh_last = (elm);     \
 (head)->stqh_last = &(elm)->field.stqe_next;   \
} while (/*CONSTCOND*/0)

#define STAILQ_INSERT_AFTER(head, listelm, elm, field) do {  \
 if (((elm)->field.stqe_next = (listelm)->field.stqe_next) == NULL)\
  (head)->stqh_last = &(elm)->field.stqe_next;  \
 (listelm)->field.stqe_next = (elm);    \
} while (/*CONSTCOND*/0)
```

```
#define STAILQ_REMOVE_HEAD(head, field) do {    \
 if (((head)->stqh_first = (head)->stqh_first->field.stqe_next)
 == NULL) \
  (head)->stqh_last = &(head)->stqh_first;   \
} while (/*CONSTCOND*/0)

#define STAILQ_REMOVE(head, elm, type, field) do {   \
 if ((head)->stqh_first == (elm)) {    \
  STAILQ_REMOVE_HEAD((head), field);   \
 } else {       \
  struct type *curelm = (head)->stqh_first;  \
  while (curelm->field.stqe_next != (elm))   \
   curelm = curelm->field.stqe_next;  \
  if ((curelm->field.stqe_next =    \
   curelm->field.stqe_next->field.stqe_next) == NULL) \
      (head)->stqh_last = &(curelm)->field.stqe_next; \
 }       \
} while (/*CONSTCOND*/0)

#define STAILQ_FOREACH(var, head, field)    \
 for ((var) = ((head)->stqh_first);    \
  (var);       \
  (var) = ((var)->field.stqe_next))

#define STAILQ_FOREACH_SAFE(var, head, field, tvar)   \
 for ((var) = STAILQ_FIRST((head));    \
    (var) && ((tvar) = STAILQ_NEXT((var), field), 1);  \
    (var) = (tvar))

#define STAILQ_CONCAT(head1, head2) do {    \
 if (!STAILQ_EMPTY((head2))) {     \
  *(head1)->stqh_last
 = (head2)->stqh_first;  \
  (head1)->stqh_last = (head2)->stqh_last;  \
  STAILQ_INIT((head2));     \
 }       \
} while (/*CONSTCOND*/0)

#define STAILQ_LAST(head, type, field)     \
 (STAILQ_EMPTY((head)) ?      \
  NULL :       \
       ((struct type *)(void *)    \
  ((char *)((head)->stqh_last) - offsetof(struct type, field))))



#ifndef _KERNEL
/*
* Circular queue definitions. Do not use. We still keep the macros
```

```
* for compatibility but because of pointer aliasing issues their use
* is discouraged!
*/

/*
* __launder_type():  We use this ugly hack to work around the the compiler
* noticing that two types may not alias each other and elide tests in code.
* We hit this in the CIRCLEQ macros when comparing 'struct name *' and
* 'struct type *' (see CIRCLEQ_HEAD()).  Modern compilers (such as GCC
* 4.8) declare these comparisons as always false, causing the code to
* not run as designed.
*
* This hack is only to be used for comparisons and thus can be fully const.
 * Do not use for assignment.
*
* If we ever choose to change the ABI of the CIRCLEQ macros, we could fix
* this by changing the head/tail sentinal values, but see the note above
* this one.
*/
static __inline const void * __launder_type(const void *);
static __inline const void *
__launder_type(const void *__x)
{
 __asm __volatile("" : "+r" (__x));
 return __x;
}

#if defined(QUEUEDEBUG)
#define QUEUEDEBUG_CIRCLEQ_HEAD(head, field)    \
 if ((head)->cqh_first != CIRCLEQ_ENDC(head) &&   \
    (head)->cqh_first->field.cqe_prev != CIRCLEQ_ENDC(head)) \
  QUEUEDEBUG_ABORT("CIRCLEQ head forw %p %s:%d", (head), \
       __FILE__, __LINE__);    \
 if ((head)->cqh_last != CIRCLEQ_ENDC(head) &&   \
    (head)->cqh_last->field.cqe_next != CIRCLEQ_ENDC(head)) \
  QUEUEDEBUG_ABORT("CIRCLEQ head back %p %s:%d", (head), \
       __FILE__, __LINE__);
#define QUEUEDEBUG_CIRCLEQ_ELM(head, elm, field)   \
 if ((elm)->field.cqe_next == CIRCLEQ_ENDC(head)) {  \
  if ((head)->cqh_last != (elm))    \
   QUEUEDEBUG_ABORT("CIRCLEQ
 elm last %p %s:%d", \
      (elm), __FILE__, __LINE__);   \
 } else {      \
  if ((elm)->field.cqe_next->field.cqe_prev != (elm)) \
   QUEUEDEBUG_ABORT("CIRCLEQ elm forw %p %s:%d", \
      (elm), __FILE__, __LINE__);   \
 }       \
```

```
 if ((elm)->field.cqe_prev == CIRCLEQ_ENDC(head)) {  \
  if ((head)->cqh_first != (elm))    \
   QUEUEDEBUG_ABORT("CIRCLEQ elm first %p %s:%d", \
       (elm), __FILE__, __LINE__);   \
 } else {       \
  if ((elm)->field.cqe_prev->field.cqe_next != (elm)) \
   QUEUEDEBUG_ABORT("CIRCLEQ elm prev %p %s:%d", \
       (elm), __FILE__, __LINE__);   \
 }
#define QUEUEDEBUG_CIRCLEQ_POSTREMOVE(elm, field)   \
 (elm)->field.cqe_next = (void *)1L;    \
 (elm)->field.cqe_prev = (void *)1L;
#else
#define QUEUEDEBUG_CIRCLEQ_HEAD(head, field)
#define QUEUEDEBUG_CIRCLEQ_ELM(head, elm, field)
#define QUEUEDEBUG_CIRCLEQ_POSTREMOVE(elm, field)
#endif

#define CIRCLEQ_HEAD(name, type)     \
struct name {        \
 struct type *cqh_first;  /*
 first element */  \
 struct type *cqh_last;  /* last element */  \
}

#define CIRCLEQ_HEAD_INITIALIZER(head)     \
 { CIRCLEQ_END(&head), CIRCLEQ_END(&head) }

#define CIRCLEQ_ENTRY(type)      \
struct {        \
 struct type *cqe_next;  /* next element */  \
 struct type *cqe_prev;  /* previous element */  \
}

/*
* Circular queue functions.
*/
#define CIRCLEQ_INIT(head) do {      \
 (head)->cqh_first = CIRCLEQ_END(head);    \
 (head)->cqh_last = CIRCLEQ_END(head);    \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_INSERT_AFTER(head, listelm, elm, field) do {  \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 QUEUEDEBUG_CIRCLEQ_ELM((head), (listelm), field)  \
 (elm)->field.cqe_next = (listelm)->field.cqe_next;  \
 (elm)->field.cqe_prev = (listelm);    \
 if ((listelm)->field.cqe_next == CIRCLEQ_ENDC(head))  \
```

```
 (head)->cqh_last = (elm);    \
 else       \
  (listelm)->field.cqe_next->field.cqe_prev = (elm); \
 (listelm)->field.cqe_next = (elm);    \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_INSERT_BEFORE(head,
 listelm, elm, field) do {  \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 QUEUEDEBUG_CIRCLEQ_ELM((head), (listelm), field)  \
 (elm)->field.cqe_next = (listelm);    \
 (elm)->field.cqe_prev = (listelm)->field.cqe_prev;  \
 if ((listelm)->field.cqe_prev == CIRCLEQ_ENDC(head))  \
  (head)->cqh_first = (elm);    \
 else       \
  (listelm)->field.cqe_prev->field.cqe_next = (elm); \
 (listelm)->field.cqe_prev = (elm);    \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_INSERT_HEAD(head, elm, field) do {   \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 (elm)->field.cqe_next = (head)->cqh_first;   \
 (elm)->field.cqe_prev = CIRCLEQ_END(head);   \
 if ((head)->cqh_last == CIRCLEQ_ENDC(head))   \
  (head)->cqh_last = (elm);    \
 else       \
  (head)->cqh_first->field.cqe_prev = (elm);  \
 (head)->cqh_first = (elm);     \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_INSERT_TAIL(head, elm, field) do {   \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 (elm)->field.cqe_next
 = CIRCLEQ_END(head);   \
 (elm)->field.cqe_prev = (head)->cqh_last;   \
 if ((head)->cqh_first == CIRCLEQ_ENDC(head))   \
  (head)->cqh_first = (elm);    \
 else       \
  (head)->cqh_last->field.cqe_next = (elm);  \
 (head)->cqh_last = (elm);     \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_REMOVE(head, elm, field) do {    \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 QUEUEDEBUG_CIRCLEQ_ELM((head), (elm), field)   \
 if ((elm)->field.cqe_next == CIRCLEQ_ENDC(head))  \
  (head)->cqh_last = (elm)->field.cqe_prev;  \
 else       \
```

```
 (elm)->field.cqe_next->field.cqe_prev =   \
     (elm)->field.cqe_prev;    \
 if ((elm)->field.cqe_prev == CIRCLEQ_ENDC(head))  \
  (head)->cqh_first = (elm)->field.cqe_next;  \
 else       \
  (elm)->field.cqe_prev->field.cqe_next =   \
     (elm)->field.cqe_next;    \
 QUEUEDEBUG_CIRCLEQ_POSTREMOVE((elm), field)   \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_FOREACH(var, head, field)    \
 for ((var) = ((head)->cqh_first);    \
  (var) != CIRCLEQ_ENDC(head);    \
  (var)
 = ((var)->field.cqe_next))

#define CIRCLEQ_FOREACH_REVERSE(var, head, field)   \
 for ((var) = ((head)->cqh_last);    \
  (var) != CIRCLEQ_ENDC(head);    \
  (var) = ((var)->field.cqe_prev))

/*
* Circular queue access methods.
*/
#define CIRCLEQ_FIRST(head)  ((head)->cqh_first)
#define CIRCLEQ_LAST(head)  ((head)->cqh_last)
/* For comparisons */
#define CIRCLEQ_ENDC(head)  (__launder_type(head))
/* For assignments */
#define CIRCLEQ_END(head)  ((void *)(head))
#define CIRCLEQ_NEXT(elm, field) ((elm)->field.cqe_next)
#define CIRCLEQ_PREV(elm, field) ((elm)->field.cqe_prev)
#define CIRCLEQ_EMPTY(head)      \
   (CIRCLEQ_FIRST(head) == CIRCLEQ_ENDC(head))

#define CIRCLEQ_LOOP_NEXT(head, elm, field)    \
 (((elm)->field.cqe_next == CIRCLEQ_ENDC(head))   \
     ? ((head)->cqh_first)     \
     : (elm->field.cqe_next))
#define CIRCLEQ_LOOP_PREV(head, elm, field)    \
 (((elm)->field.cqe_prev == CIRCLEQ_ENDC(head))   \
     ? ((head)->cqh_last)     \
     :
 (elm->field.cqe_prev))
#endif /* !_KERNEL */

#endif /* !_SYS_QUEUE_H_ */
```

```
#ifndef _SYS_CDEFS_H_
#define _SYS_CDEFS_H_

#warning usage of non-standard #include <sys/cdefs.h> is deprecated

#undef __P
#undef __PMT

#define __P(args) args
#define __PMT(args) args

#define __CONCAT(x,y) x ## y
#define __STRING(x) #x

#ifdef  __cplusplus
# define __BEGIN_DECLS extern "C" {
# define __END_DECLS }
#else
# define __BEGIN_DECLS
# define __END_DECLS
#endif

#if defined(__GNUC__) && !defined(__cplusplus)
# define __THROW __attribute__ ((__nothrow__))
# define __NTH(fct) __attribute__ ((__nothrow__)) fct
#else
# define __THROW
# define __NTH(fct)     fct
#endif

#endif /* _SYS_CDEFS_H_ */
# Contributor: Fabian Affolter <fabian@affolter-engineering.ch>
# Maintainer: Fabian Affolter <fabian@affolter-engineering.ch>
pkgname=py3-flake8-copyright
_pkgname=flake8-copyright
pkgver=0.2.4
pkgrel=3
pkgdesc="Extension for flake8 which checks for copyrights"
options="!check" # No testsuite
url="https://github.com/savoirfairelinux/flake8-copyright"
arch="noarch"
license="MIT"
depends="py3-flake8 py3-setuptools"
makedepends="py3-gpep517 py3-wheel"
subpackages="$pkgname-pyc"
source="https://files.pythonhosted.org/packages/source/${_pkgname:0:1}/$_pkgname/$_pkgname-$pkgver.tar.gz"
builddir="$srcdir"/$_pkgname-$pkgver
```

```
replaces="py-flake8-copyright"                  # Backwards compatibility
provides="py-flake8-copyright=$pkgver-r$pkgrel" # Backwards compatibility

build() {
 gpep517 build-wheel \
  --wheel-dir .dist \
  --output-fd 3 3>&1 >&2
}

package() {
 gpep517 install-wheel --destdir "$pkgdir" \
  .dist/*.whl
}

sha512sums="
a6ab47e1bb715618f075c51f398e18180404871b3b0faf1c2d30701d5203db6bc23771bf22ffb5bafcd8ee856b9b64237
b316bd503ae7dceed6ca284ccd5a74d
  flake8-copyright-0.2.4.tar.gz
"
# Maintainer: fossdd <fossdd@pwned.life>
pkgname=cargo-license
pkgver=0.6.1
pkgrel=1
pkgdesc="Cargo subcommand to see license of dependencies"
url="https://github.com/onur/cargo-license"
arch="all"
license="MIT"
makedepends="cargo cargo-auditable"
source="$pkgname-$pkgver.tar.gz::https://crates.io/api/v1/crates/cargo-license/$pkgver/download"

prepare() {
 default_prepare

 cargo fetch --target="$CTARGET" --locked
}

build() {
 cargo auditable build --release --frozen
}

check() {
 cargo test --frozen
}

package() {
 install -Dm755 target/release/cargo-license -t "$pkgdir"/usr/bin
}
```

```
sha512sums="
36215145e79965be090ae2f5ce6f5eb208465eb67a94c26bed1fe70a131c46c6dc35695e30852759b7366883fbc3caf00
272d796ac634f0a5e1d49232b6b29d5  cargo-license-0.6.1.tar.gz
"
/* $NetBSD: tree.h,v 1.20 2013/09/14 13:20:45 joerg Exp $ */
/* $OpenBSD: tree.h,v 1.13 2011/07/09 00:19:45 pirofti Exp $ */
/* Modified by Void Linux. */
/*
* Copyright 2002 Niels Provos <provos@citi.umich.edu>
* All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the above copyright
*    notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*    notice, this list of conditions and the following disclaimer in the
*    documentation and/or other materials provided with the distribution.
*
* THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS" AND ANY EXPRESS OR
* IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
* OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
* IN NO EVENT SHALL THE
 AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
* INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
* DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
* THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
* THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
*/

#ifndef _SYS_TREE_H_
#define _SYS_TREE_H_

#ifdef __GNUC__
#define __GNUC_PREREQ__(x, y)      \
 ((__GNUC__ == (x) && __GNUC_MINOR__ >= (y)) ||   \
  (__GNUC__ > (x)))
#else
#define __GNUC_PREREQ__(x, y) 0
#endif

#if __GNUC_PREREQ__(2, 7) || defined(__lint__)
#define _sys_tree_h_unused __attribute__((__unused__))
#else
#define _sys_tree_h_unused /* delete */
```

```
#endif

/*
* This file defines data structures for different types of trees:
* splay trees and red-black trees.
*
* A splay tree is a self-organizing
 data structure.  Every operation
* on the tree causes a splay to happen.  The splay moves the requested
* node to the root of the tree and partly rebalances it.
*
* This has the benefit that request locality causes faster lookups as
* the requested nodes move to the top of the tree.  On the other hand,
* every lookup causes memory writes.
*
* The Balance Theorem bounds the total access time for m operations
* and n inserts on an initially empty tree as O((m + n)lg n).  The
* amortized cost for a sequence of m accesses to a splay tree is O(lg n);
*
* A red-black tree is a binary search tree with the node color as an
* extra attribute.  It fulfills a set of conditions:
* - every search path from the root to a leaf consists of the
*   same number of black nodes,
* - each red node (except for the root) has a black parent,
* - each leaf node is black.
*
* Every operation on a red-black tree is bounded as O(lg n).
* The maximum height of a red-black tree is 2lg (n+1).
 */

#define SPLAY_HEAD(name, type)      \
struct name {       \
 struct type *sph_root; /* root of the tree */   \
}

#define SPLAY_INITIALIZER(root)     \
 { NULL }

#define SPLAY_INIT(root) do {      \
 (root)->sph_root = NULL;     \
} while (/*CONSTCOND*/ 0)

#define SPLAY_ENTRY(type)      \
struct {       \
 struct type *spe_left; /* left element */   \
 struct type *spe_right; /* right element */   \
}
```

```
#define SPLAY_LEFT(elm, field)  (elm)->field.spe_left
#define SPLAY_RIGHT(elm, field)  (elm)->field.spe_right
#define SPLAY_ROOT(head)  (head)->sph_root
#define SPLAY_EMPTY(head)  (SPLAY_ROOT(head) == NULL)

/* SPLAY_ROTATE_{LEFT,RIGHT} expect that tmp hold SPLAY_{RIGHT,LEFT} */
#define SPLAY_ROTATE_RIGHT(head, tmp, field) do {   \
 SPLAY_LEFT((head)->sph_root, field) = SPLAY_RIGHT(tmp, field); \
 SPLAY_RIGHT(tmp, field) = (head)->sph_root;   \
 (head)->sph_root = tmp;      \
} while (/*CONSTCOND*/ 0)

#define SPLAY_ROTATE_LEFT(head, tmp, field) do {   \
 SPLAY_RIGHT((head)->sph_root,
 field) = SPLAY_LEFT(tmp, field); \
 SPLAY_LEFT(tmp, field) = (head)->sph_root;   \
 (head)->sph_root = tmp;      \
} while (/*CONSTCOND*/ 0)

#define SPLAY_LINKLEFT(head, tmp, field) do {    \
 SPLAY_LEFT(tmp, field) = (head)->sph_root;   \
 tmp = (head)->sph_root;      \
 (head)->sph_root = SPLAY_LEFT((head)->sph_root, field);  \
} while (/*CONSTCOND*/ 0)

#define SPLAY_LINKRIGHT(head, tmp, field) do {    \
 SPLAY_RIGHT(tmp, field) = (head)->sph_root;   \
 tmp = (head)->sph_root;      \
 (head)->sph_root = SPLAY_RIGHT((head)->sph_root, field); \
} while (/*CONSTCOND*/ 0)

#define SPLAY_ASSEMBLE(head, node, left, right, field) do {  \
 SPLAY_RIGHT(left, field) = SPLAY_LEFT((head)->sph_root, field); \
 SPLAY_LEFT(right, field) = SPLAY_RIGHT((head)->sph_root, field);\
 SPLAY_LEFT((head)->sph_root, field) = SPLAY_RIGHT(node, field); \
 SPLAY_RIGHT((head)->sph_root, field) = SPLAY_LEFT(node, field); \
} while (/*CONSTCOND*/ 0)

/* Generates prototypes and inline functions */

#define
 SPLAY_PROTOTYPE(name, type, field, cmp)    \
void name##_SPLAY(struct name *, struct type *);   \
void name##_SPLAY_MINMAX(struct name *, int);    \
struct type *name##_SPLAY_INSERT(struct name *, struct type *);  \
struct type *name##_SPLAY_REMOVE(struct name *, struct type *);  \
        \
/* Finds the node with the same key as elm */    \
```

```
static __inline struct type *      \
name##_SPLAY_FIND(struct name *head, struct type *elm)   \
{        \
 if (SPLAY_EMPTY(head))      \
  return(NULL);      \
 name##_SPLAY(head, elm);     \
 if ((cmp)(elm, (head)->sph_root) == 0)    \
  return (head->sph_root);    \
 return (NULL);       \
}        \
        \
static __inline _sys_tree_h_unused struct type *   \
name##_SPLAY_NEXT(struct name *head, struct type *elm)   \
{        \
 name##_SPLAY(head, elm);     \
 if (SPLAY_RIGHT(elm, field) != NULL) {    \
  elm = SPLAY_RIGHT(elm, field);    \
  while (SPLAY_LEFT(elm, field) != NULL) {  \
   elm = SPLAY_LEFT(elm, field);   \
  }       \
 }
 else       \
  elm = NULL;      \
 return (elm);       \
}        \
        \
static _sys_tree_h_unused __inline struct type *   \
name##_SPLAY_MIN_MAX(struct name *head, int val)   \
{        \
 name##_SPLAY_MINMAX(head, val);     \
       return (SPLAY_ROOT(head));     \
}

/* Main splay operation.
* Moves node close to the key of elm to top
*/
#define SPLAY_GENERATE(name, type, field, cmp)    \
struct type *        \
name##_SPLAY_INSERT(struct name *head, struct type *elm)  \
{        \
   if (SPLAY_EMPTY(head)) {      \
     SPLAY_LEFT(elm, field) = SPLAY_RIGHT(elm, field) = NULL; \
   } else {        \
     int __comp;       \
     name##_SPLAY(head, elm);     \
     __comp = (cmp)(elm, (head)->sph_root);   \
     if(__comp < 0) {      \
      SPLAY_LEFT(elm, field) = SPLAY_LEFT((head)->sph_root, field);\
```

```
      SPLAY_RIGHT(elm, field) = (head)->sph_root;  \
      SPLAY_LEFT((head)->sph_root, field) = NULL;  \
     } else if (__comp > 0) {     \
      SPLAY_RIGHT(elm,
 field) = SPLAY_RIGHT((head)->sph_root, field);\
      SPLAY_LEFT(elm, field) = (head)->sph_root;  \
      SPLAY_RIGHT((head)->sph_root, field) = NULL; \
     } else       \
      return ((head)->sph_root);    \
   }        \
   (head)->sph_root = (elm);      \
   return (NULL);       \
}        \
        \
struct type *        \
name##_SPLAY_REMOVE(struct name *head, struct type *elm)  \
{        \
 struct type *__tmp;      \
 if (SPLAY_EMPTY(head))      \
  return (NULL);      \
 name##_SPLAY(head, elm);     \
 if ((cmp)(elm, (head)->sph_root) == 0) {   \
  if (SPLAY_LEFT((head)->sph_root, field) == NULL) { \
   (head)->sph_root = SPLAY_RIGHT((head)->sph_root, field);\
  } else {      \
   __tmp = SPLAY_RIGHT((head)->sph_root, field); \
   (head)->sph_root = SPLAY_LEFT((head)->sph_root, field);\
   name##_SPLAY(head, elm);   \
   SPLAY_RIGHT((head)->sph_root, field) = __tmp; \
  }       \
  return (elm);      \
 }        \
 return (NULL);       \
}        \
        \
void         \
name##_SPLAY(struct
 name *head, struct type *elm)   \
{        \
 struct type __node, *__left, *__right, *__tmp;   \
 int __comp;       \
\
 SPLAY_LEFT(&__node, field) = SPLAY_RIGHT(&__node, field) = NULL;\
 __left = __right = &__node;     \
\
 while ((__comp = (cmp)(elm, (head)->sph_root)) != 0) {  \
  if (__comp < 0) {     \
   __tmp = SPLAY_LEFT((head)->sph_root, field); \
```

```
  if (__tmp == NULL)    \
   break;     \
  if ((cmp)(elm, __tmp) < 0){   \
   SPLAY_ROTATE_RIGHT(head, __tmp, field); \
   if (SPLAY_LEFT((head)->sph_root, field) == NULL)\
    break;    \
  }      \
  SPLAY_LINKLEFT(head, __right, field);  \
 } else if (__comp > 0) {    \
  __tmp = SPLAY_RIGHT((head)->sph_root, field); \
  if (__tmp == NULL)    \
   break;     \
  if ((cmp)(elm, __tmp) > 0){   \
   SPLAY_ROTATE_LEFT(head, __tmp, field); \
   if (SPLAY_RIGHT((head)->sph_root, field) == NULL)\
    break;    \
  }      \
  SPLAY_LINKRIGHT(head, __left, field);  \
 }       \
}       \
 SPLAY_ASSEMBLE(head,
 &__node, __left, __right, field);  \
}        \
       \
/* Splay with either the minimum or the maximum element   \
* Used to find minimum or maximum element in tree.   \
*/        \
void name##_SPLAY_MINMAX(struct name *head, int __comp) \
{        \
 struct type __node, *__left, *__right, *__tmp;   \
\
 SPLAY_LEFT(&__node, field) = SPLAY_RIGHT(&__node, field) = NULL;\
 __left = __right = &__node;     \
\
 while (1) {       \
  if (__comp < 0) {     \
   __tmp = SPLAY_LEFT((head)->sph_root, field); \
   if (__tmp == NULL)    \
    break;     \
   if (__comp < 0){    \
    SPLAY_ROTATE_RIGHT(head, __tmp, field); \
    if (SPLAY_LEFT((head)->sph_root, field) == NULL)\
     break;    \
   }      \
   SPLAY_LINKLEFT(head, __right, field);  \
  } else if (__comp > 0) {    \
   __tmp = SPLAY_RIGHT((head)->sph_root, field); \
   if (__tmp == NULL)    \
```

```
    break;     \
   if (__comp > 0) {    \
    SPLAY_ROTATE_LEFT(head, __tmp, field); \
    if (SPLAY_RIGHT((head)->sph_root,
 field) == NULL)\
     break;    \
   }      \
   SPLAY_LINKRIGHT(head, __left, field);  \
  }       \
 }        \
 SPLAY_ASSEMBLE(head, &__node, __left, __right, field);  \
}

#define SPLAY_NEGINF -1
#define SPLAY_INF 1

#define SPLAY_INSERT(name, x, y) name##_SPLAY_INSERT(x, y)
#define SPLAY_REMOVE(name, x, y) name##_SPLAY_REMOVE(x, y)
#define SPLAY_FIND(name, x, y)  name##_SPLAY_FIND(x, y)
#define SPLAY_NEXT(name, x, y)  name##_SPLAY_NEXT(x, y)
#define SPLAY_MIN(name, x)  (SPLAY_EMPTY(x) ? NULL \
    : name##_SPLAY_MIN_MAX(x, SPLAY_NEGINF))
#define SPLAY_MAX(name, x)  (SPLAY_EMPTY(x) ? NULL \
    : name##_SPLAY_MIN_MAX(x, SPLAY_INF))

#define SPLAY_FOREACH(x, name, head)     \
 for ((x) = SPLAY_MIN(name, head);    \
      (x) != NULL;      \
      (x) = SPLAY_NEXT(name, head, x))

/* Macros that define a red-black tree */
#define RB_HEAD(name, type)      \
struct name {        \
 struct type *rbh_root; /* root of the tree */   \
}

#define RB_INITIALIZER(root)      \
 {
 NULL }

#define RB_INIT(root) do {      \
 (root)->rbh_root = NULL;     \
} while (/*CONSTCOND*/ 0)

#define RB_BLACK 0
#define RB_RED  1
#define RB_ENTRY(type)       \
struct {        \
```

```
 struct type *rbe_left;  /* left element */  \
 struct type *rbe_right;  /* right element */  \
 struct type *rbe_parent; /* parent element */  \
 int rbe_color;   /* node color */  \
}

#define RB_LEFT(elm, field)  (elm)->field.rbe_left
#define RB_RIGHT(elm, field)  (elm)->field.rbe_right
#define RB_PARENT(elm, field)  (elm)->field.rbe_parent
#define RB_COLOR(elm, field)  (elm)->field.rbe_color
#define RB_ROOT(head)   (head)->rbh_root
#define RB_EMPTY(head)   (RB_ROOT(head) == NULL)

#define RB_SET(elm, parent, field) do {     \
 RB_PARENT(elm, field) = parent;     \
 RB_LEFT(elm, field) = RB_RIGHT(elm, field) = NULL;  \
 RB_COLOR(elm, field) = RB_RED;     \
} while (/*CONSTCOND*/ 0)

#define RB_SET_BLACKRED(black, red, field) do {    \
 RB_COLOR(black, field) = RB_BLACK;    \
 RB_COLOR(red, field)
 = RB_RED;     \
} while (/*CONSTCOND*/ 0)

#ifndef RB_AUGMENT
#define RB_AUGMENT(x) do {} while (/*CONSTCOND*/ 0)
#endif

#define RB_ROTATE_LEFT(head, elm, tmp, field) do {   \
 (tmp) = RB_RIGHT(elm, field);     \
 if ((RB_RIGHT(elm, field) = RB_LEFT(tmp, field)) != NULL) { \
  RB_PARENT(RB_LEFT(tmp, field), field) = (elm);  \
 }       \
 RB_AUGMENT(elm);      \
 if ((RB_PARENT(tmp, field) = RB_PARENT(elm, field)) != NULL) { \
  if ((elm) == RB_LEFT(RB_PARENT(elm, field), field)) \
   RB_LEFT(RB_PARENT(elm, field), field) = (tmp); \
  else       \
   RB_RIGHT(RB_PARENT(elm, field), field) = (tmp); \
 } else       \
 (head)->rbh_root = (tmp);    \
 RB_LEFT(tmp, field) = (elm);     \
 RB_PARENT(elm, field) = (tmp);     \
 RB_AUGMENT(tmp);      \
 if ((RB_PARENT(tmp, field)))     \
  RB_AUGMENT(RB_PARENT(tmp, field));   \
} while (/*CONSTCOND*/ 0)
```

```
#define RB_ROTATE_RIGHT(head, elm, tmp, field) do {   \
 (tmp) = RB_LEFT(elm, field);     \
 if ((RB_LEFT(elm, field) = RB_RIGHT(tmp, field))
 != NULL) { \
  RB_PARENT(RB_RIGHT(tmp, field), field) = (elm);  \
 }       \
 RB_AUGMENT(elm);      \
 if ((RB_PARENT(tmp, field) = RB_PARENT(elm, field)) != NULL) { \
  if ((elm) == RB_LEFT(RB_PARENT(elm, field), field)) \
   RB_LEFT(RB_PARENT(elm, field), field) = (tmp); \
  else       \
   RB_RIGHT(RB_PARENT(elm, field), field) = (tmp); \
 } else       \
  (head)->rbh_root = (tmp);    \
 RB_RIGHT(tmp, field) = (elm);     \
 RB_PARENT(elm, field) = (tmp);     \
 RB_AUGMENT(tmp);      \
 if ((RB_PARENT(tmp, field)))     \
  RB_AUGMENT(RB_PARENT(tmp, field));   \
} while (/*CONSTCOND*/ 0)

/* Generates prototypes and inline functions */
#define RB_PROTOTYPE(name, type, field, cmp)    \
 RB_PROTOTYPE_INTERNAL(name, type, field, cmp,)
#define RB_PROTOTYPE_STATIC(name, type, field, cmp)   \
 RB_PROTOTYPE_INTERNAL(name, type, field, cmp, _sys_tree_h_unused static)
#define RB_PROTOTYPE_INTERNAL(name, type, field, cmp, attr)  \
attr void name##_RB_INSERT_COLOR(struct name *, struct
 type *);  \
attr void name##_RB_REMOVE_COLOR(struct name *, struct type *, struct type *);\
attr struct type *name##_RB_REMOVE(struct name *, struct type *); \
attr struct type *name##_RB_INSERT(struct name *, struct type *); \
attr struct type *name##_RB_FIND(struct name *, struct type *);  \
attr struct type *name##_RB_NFIND(struct name *, struct type *); \
attr struct type *name##_RB_NEXT(struct type *);   \
attr struct type *name##_RB_PREV(struct type *);   \
attr struct type *name##_RB_MINMAX(struct name *, int);   \
        \

/* Main rb operation.
* Moves node close to the key of elm to top
*/
#define RB_GENERATE(name, type, field, cmp)    \
 RB_GENERATE_INTERNAL(name, type, field, cmp,)
#define RB_GENERATE_STATIC(name, type, field, cmp)   \
 RB_GENERATE_INTERNAL(name, type, field, cmp, _sys_tree_h_unused static)
#define RB_GENERATE_INTERNAL(name, type, field, cmp, attr)  \
```

```
attr void       \
name##_RB_INSERT_COLOR(struct name *head, struct type *elm)  \
{       \
 struct type
 *parent, *gparent, *tmp;    \
 while ((parent = RB_PARENT(elm, field)) != NULL &&  \
     RB_COLOR(parent, field) == RB_RED) {    \
  gparent = RB_PARENT(parent, field);   \
  if (parent == RB_LEFT(gparent, field)) {  \
   tmp = RB_RIGHT(gparent, field);   \
   if (tmp && RB_COLOR(tmp, field) == RB_RED) { \
    RB_COLOR(tmp, field) = RB_BLACK; \
    RB_SET_BLACKRED(parent, gparent, field);\
    elm = gparent;    \
    continue;    \
   }      \
   if (RB_RIGHT(parent, field) == elm) {  \
    RB_ROTATE_LEFT(head, parent, tmp, field);\
    tmp = parent;    \
    parent = elm;    \
    elm = tmp;    \
   }      \
   RB_SET_BLACKRED(parent, gparent, field); \
   RB_ROTATE_RIGHT(head, gparent, tmp, field); \
  } else {      \
   tmp = RB_LEFT(gparent, field);   \
   if (tmp && RB_COLOR(tmp, field) == RB_RED) { \
    RB_COLOR(tmp, field) = RB_BLACK; \
    RB_SET_BLACKRED(parent, gparent, field);\
    elm = gparent;    \
    continue;    \
   }      \
   if (RB_LEFT(parent, field) == elm)
  {  \
    RB_ROTATE_RIGHT(head, parent, tmp, field);\
    tmp = parent;    \
    parent = elm;    \
    elm = tmp;    \
   }      \
   RB_SET_BLACKRED(parent, gparent, field); \
   RB_ROTATE_LEFT(head, gparent, tmp, field); \
  }       \
 }       \
 RB_COLOR(head->rbh_root, field) = RB_BLACK;   \
}       \
        \
attr void       \
name##_RB_REMOVE_COLOR(struct name *head, struct type *parent, struct type *elm) \
```

```
{       \
 struct type *tmp;      \
 while ((elm == NULL || RB_COLOR(elm, field) == RB_BLACK) && \
     elm != RB_ROOT(head)) {     \
  if (RB_LEFT(parent, field) == elm) {   \
   tmp = RB_RIGHT(parent, field);   \
   if (RB_COLOR(tmp, field) == RB_RED) {  \
    RB_SET_BLACKRED(tmp, parent, field); \
    RB_ROTATE_LEFT(head, parent, tmp, field);\
    tmp = RB_RIGHT(parent, field);  \
   }      \
   if ((RB_LEFT(tmp, field) == NULL ||  \
       RB_COLOR(RB_LEFT(tmp, field), field) == RB_BLACK) &&\
       (RB_RIGHT(tmp, field) == NULL ||  \
       RB_COLOR(RB_RIGHT(tmp,
 field), field) == RB_BLACK)) {\
    RB_COLOR(tmp, field) = RB_RED;  \
    elm = parent;    \
    parent = RB_PARENT(elm, field);  \
   } else {     \
    if (RB_RIGHT(tmp, field) == NULL || \
        RB_COLOR(RB_RIGHT(tmp, field), field) == RB_BLACK) {\
     struct type *oleft;  \
     if ((oleft = RB_LEFT(tmp, field)) \
         != NULL)   \
      RB_COLOR(oleft, field) = RB_BLACK;\
     RB_COLOR(tmp, field) = RB_RED; \
     RB_ROTATE_RIGHT(head, tmp, oleft, field);\
     tmp = RB_RIGHT(parent, field); \
    }     \
    RB_COLOR(tmp, field) = RB_COLOR(parent, field);\
    RB_COLOR(parent, field) = RB_BLACK; \
    if (RB_RIGHT(tmp, field))  \
     RB_COLOR(RB_RIGHT(tmp, field), field) = RB_BLACK;\
    RB_ROTATE_LEFT(head, parent, tmp, field);\
    elm = RB_ROOT(head);   \
    break;     \
   }      \
  } else {      \
   tmp = RB_LEFT(parent, field);   \
   if (RB_COLOR(tmp, field) == RB_RED) {  \
    RB_SET_BLACKRED(tmp, parent, field); \
    RB_ROTATE_RIGHT(head, parent, tmp, field);\
    tmp
 = RB_LEFT(parent, field);  \
   }      \
   if ((RB_LEFT(tmp, field) == NULL ||  \
       RB_COLOR(RB_LEFT(tmp, field), field) == RB_BLACK) &&\
```

```
      (RB_RIGHT(tmp, field) == NULL ||  \
      RB_COLOR(RB_RIGHT(tmp, field), field) == RB_BLACK)) {\
    RB_COLOR(tmp, field) = RB_RED;  \
    elm = parent;    \
    parent = RB_PARENT(elm, field);  \
   } else {     \
    if (RB_LEFT(tmp, field) == NULL || \
        RB_COLOR(RB_LEFT(tmp, field), field) == RB_BLACK) {\
     struct type *oright;  \
     if ((oright = RB_RIGHT(tmp, field)) \
         != NULL)   \
      RB_COLOR(oright, field) = RB_BLACK;\
     RB_COLOR(tmp, field) = RB_RED; \
     RB_ROTATE_LEFT(head, tmp, oright, field);\
     tmp = RB_LEFT(parent, field); \
    }     \
    RB_COLOR(tmp, field) = RB_COLOR(parent, field);\
    RB_COLOR(parent, field) = RB_BLACK; \
    if (RB_LEFT(tmp, field))  \
     RB_COLOR(RB_LEFT(tmp, field), field) = RB_BLACK;\
    RB_ROTATE_RIGHT(head, parent, tmp, field);\
    elm = RB_ROOT(head);   \
    break;     \
   }      \
  }       \
 }       \
 if
 (elm)       \
  RB_COLOR(elm, field) = RB_BLACK;   \
}        \
        \
attr struct type *       \
name##_RB_REMOVE(struct name *head, struct type *elm)   \
{        \
 struct type *child, *parent, *old = elm;   \
 int color;       \
 if (RB_LEFT(elm, field) == NULL)    \
  child = RB_RIGHT(elm, field);    \
 else if (RB_RIGHT(elm, field) == NULL)    \
  child = RB_LEFT(elm, field);    \
 else {        \
  struct type *left;     \
  elm = RB_RIGHT(elm, field);    \
  while ((left = RB_LEFT(elm, field)) != NULL)  \
   elm = left;     \
  child = RB_RIGHT(elm, field);    \
  parent = RB_PARENT(elm, field);    \
  color = RB_COLOR(elm, field);    \
```

```
 if (child)     \
  RB_PARENT(child, field) = parent;  \
 if (parent) {     \
  if (RB_LEFT(parent, field) == elm)  \
   RB_LEFT(parent, field) = child;  \
  else     \
   RB_RIGHT(parent, field) = child; \
  RB_AUGMENT(parent);    \
 } else      \
  RB_ROOT(head)
= child;    \
 if (RB_PARENT(elm, field) == old)   \
  parent = elm;     \
 (elm)->field = (old)->field;    \
 if (RB_PARENT(old, field)) {    \
  if (RB_LEFT(RB_PARENT(old, field), field) == old)\
   RB_LEFT(RB_PARENT(old, field), field) = elm;\
  else     \
   RB_RIGHT(RB_PARENT(old, field), field) = elm;\
  RB_AUGMENT(RB_PARENT(old, field));  \
 } else      \
  RB_ROOT(head) = elm;    \
 RB_PARENT(RB_LEFT(old, field), field) = elm;  \
 if (RB_RIGHT(old, field))    \
  RB_PARENT(RB_RIGHT(old, field), field) = elm; \
 if (parent) {     \
  left = parent;     \
  do {      \
   RB_AUGMENT(left);   \
  } while ((left = RB_PARENT(left, field)) != NULL); \
 }       \
 goto color;      \
}       \
parent = RB_PARENT(elm, field);     \
color = RB_COLOR(elm, field);     \
if (child)      \
 RB_PARENT(child, field) = parent;   \
if (parent) {      \
 if (RB_LEFT(parent, field) == elm)   \
  RB_LEFT(parent, field) = child;   \
 else      \
  RB_RIGHT(parent,
field) = child;  \
 RB_AUGMENT(parent);     \
} else       \
 RB_ROOT(head) = child;     \
color:        \
if (color == RB_BLACK)      \
```

```
 name##_RB_REMOVE_COLOR(head, parent, child);  \
 return (old);      \
}       \
       \
/* Inserts a node into the RB tree */    \
attr struct type *      \
name##_RB_INSERT(struct name *head, struct type *elm)   \
{       \
 struct type *tmp;     \
 struct type *parent = NULL;    \
 int comp = 0;      \
 tmp = RB_ROOT(head);     \
 while (tmp) {      \
  parent = tmp;     \
  comp = (cmp)(elm, parent);   \
  if (comp < 0)     \
   tmp = RB_LEFT(tmp, field);   \
  else if (comp > 0)    \
   tmp = RB_RIGHT(tmp, field);   \
  else      \
   return (tmp);    \
 }       \
 RB_SET(elm, parent, field);    \
 if (parent != NULL) {     \
  if (comp < 0)     \
   RB_LEFT(parent, field) = elm;   \
  else      \
   RB_RIGHT(parent, field) = elm;   \
  RB_AUGMENT(parent);    \
 } else       \
  RB_ROOT(head) = elm;    \
 name##_RB_INSERT_COLOR(head,
 elm);   \
 return (NULL);      \
}       \
       \
/* Finds the node with the same key as elm */   \
attr struct type *      \
name##_RB_FIND(struct name *head, struct type *elm)   \
{       \
 struct type *tmp = RB_ROOT(head);   \
 int comp;      \
 while (tmp) {      \
  comp = cmp(elm, tmp);    \
  if (comp < 0)     \
   tmp = RB_LEFT(tmp, field);   \
  else if (comp > 0)    \
   tmp = RB_RIGHT(tmp, field);   \
```

```
 else       \
  return (tmp);     \
 }        \
 return (NULL);       \
}         \
         \
/* Finds the first node greater than or equal to the search key */ \
attr struct type *       \
name##_RB_NFIND(struct name *head, struct type *elm)   \
{         \
 struct type *tmp = RB_ROOT(head);    \
 struct type *res = NULL;     \
 int comp;       \
 while (tmp) {       \
  comp = cmp(elm, tmp);     \
  if (comp < 0) {      \
   res = tmp;     \
   tmp = RB_LEFT(tmp, field);   \
  }       \
  else if (comp > 0)     \
   tmp =
 RB_RIGHT(tmp, field);   \
  else       \
   return (tmp);     \
 }        \
 return (res);       \
}         \
         \
/* ARGSUSED */        \
attr struct type *       \
name##_RB_NEXT(struct type *elm)     \
{         \
 if (RB_RIGHT(elm, field)) {     \
  elm = RB_RIGHT(elm, field);    \
  while (RB_LEFT(elm, field))    \
   elm = RB_LEFT(elm, field);   \
 } else {       \
  if (RB_PARENT(elm, field) &&    \
      (elm == RB_LEFT(RB_PARENT(elm, field), field))) \
   elm = RB_PARENT(elm, field);   \
  else {       \
   while (RB_PARENT(elm, field) &&   \
       (elm == RB_RIGHT(RB_PARENT(elm, field), field)))\
    elm = RB_PARENT(elm, field);  \
   elm = RB_PARENT(elm, field);   \
  }       \
 }        \
 return (elm);       \
```

```
}       \
        \
/* ARGSUSED */      \
attr struct type *      \
name##_RB_PREV(struct type *elm)    \
{       \
 if (RB_LEFT(elm, field)) {    \
  elm = RB_LEFT(elm, field);   \
  while (RB_RIGHT(elm, field))   \
   elm = RB_RIGHT(elm, field);  \
 }
 else {      \
  if (RB_PARENT(elm, field) &&   \
      (elm == RB_RIGHT(RB_PARENT(elm, field), field))) \
   elm = RB_PARENT(elm, field);  \
  else {      \
   while (RB_PARENT(elm, field) &&  \
       (elm == RB_LEFT(RB_PARENT(elm, field), field)))\
    elm = RB_PARENT(elm, field);  \
   elm = RB_PARENT(elm, field);  \
  }      \
 }       \
 return (elm);      \
}       \
        \
attr struct type *      \
name##_RB_MINMAX(struct name *head, int val)   \
{       \
 struct type *tmp = RB_ROOT(head);   \
 struct type *parent = NULL;    \
 while (tmp) {      \
  parent = tmp;     \
  if (val < 0)     \
   tmp = RB_LEFT(tmp, field);  \
  else      \
   tmp = RB_RIGHT(tmp, field);  \
 }       \
 return (parent);     \
}

#define RB_NEGINF -1
#define RB_INF 1

#define RB_INSERT(name, x, y) name##_RB_INSERT(x, y)
#define RB_REMOVE(name, x, y) name##_RB_REMOVE(x, y)
#define RB_FIND(name, x, y) name##_RB_FIND(x, y)
#define RB_NFIND(name, x, y) name##_RB_NFIND(x,
```

```
 y)
#define RB_NEXT(name, x, y) name##_RB_NEXT(y)
#define RB_PREV(name, x, y) name##_RB_PREV(y)
#define RB_MIN(name, x)  name##_RB_MINMAX(x, RB_NEGINF)
#define RB_MAX(name, x)  name##_RB_MINMAX(x, RB_INF)

#define RB_FOREACH(x, name, head)     \
 for ((x) = RB_MIN(name, head);     \
      (x) != NULL;      \
      (x) = name##_RB_NEXT(x))

#define RB_FOREACH_FROM(x, name, y)     \
 for ((x) = (y);       \
     ((x) != NULL) && ((y) = name##_RB_NEXT(x), (x) != NULL); \
      (x) = (y))

#define RB_FOREACH_SAFE(x, name, head, y)    \
 for ((x) = RB_MIN(name, head);     \
     ((x) != NULL) && ((y) = name##_RB_NEXT(x), (x) != NULL); \
      (x) = (y))

#define RB_FOREACH_REVERSE(x, name, head)    \
 for ((x) = RB_MAX(name, head);     \
      (x) != NULL;      \
      (x) = name##_RB_PREV(x))

#define RB_FOREACH_REVERSE_FROM(x, name, y)    \
 for ((x) = (y);       \
     ((x) != NULL) && ((y) = name##_RB_PREV(x), (x) != NULL); \
      (x) = (y))

#define RB_FOREACH_REVERSE_SAFE(x, name,
 head, y)   \
 for ((x) = RB_MAX(name, head);     \
     ((x) != NULL) && ((y) = name##_RB_PREV(x), (x) != NULL); \
      (x) = (y))

#endif /* _SYS_TREE_H_ */
# Contributor: Dhruvin Gandhi <contact@dhru.vin>
# Maintainer: Patrycja Rosa <alpine@ptrcnull.me>
pkgname=py3-license-expression
_pkgname=license_expression
pkgver=30.4.0
pkgrel=0
pkgdesc="Library to parse, compare, simplify and normalize license expressions"
url="https://github.com/nexB/license-expression"
arch="noarch"
license="Apache-2.0"
```

```
depends="python3 py3-boolean.py"
makedepends="py3-setuptools py3-setuptools_scm py3-gpep517 py3-wheel"
checkdepends="py3-pytest py3-pytest-xdist"
subpackages="$pkgname-pyc"
source="https://files.pythonhosted.org/packages/source/l/$_pkgname/$_pkgname-$pkgver.tar.gz"
builddir="$srcdir/$_pkgname-$pkgver"

build() {
 gpep517 build-wheel \
  --wheel-dir .dist \
  --output-fd 3 3>&1 >&2
}

check() {
 python3 -m venv --clear --without-pip --system-site-packages .testenv
 .testenv/bin/python3 -m installer .dist/*.whl
 .testenv/bin/python3 -m pytest
}

package() {
 python3 -m installer -d "$pkgdir" \
  .dist/*.whl
}

sha512sums="
cc7cd6b5bd8ea4c99b66f074871ffd7cc78b3e8b1b0d3afd9b95efdb7147c8293db2fac977d684fc34d3d60bd79066a06
dc2bff0a38b130d9d83c63538502db1
  license_expression-30.4.0.tar.gz
"
```

1.115 aws-sdk-go-v2-service-internal-accept-encoding 1.13.1

1.115.1 Available under license :

```
GetLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
```

```
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
```

```
  strategy:
    matrix:
      python-version: [3.9]

  steps:
    - name: Checkout target
      uses: actions/checkout@v2
      with:
        path: sdkbase
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
       uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration
```

```
// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}
```

```
type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
```

ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop

Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

```
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
            "traits": {
              "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
            }
          },
          "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
```

```
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
```

```
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
                  "smithy.api#required": {}
               }
            },
             "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
               }
            }
         },
         "traits": {

      "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
          "type": "integer"
        },
        "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
             }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
```

```
            },
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoint": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
              "traits": {
                "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
```

```
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}

      }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Directory": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
```

```
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummary":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
      "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory domain.</p>",
            "smithy.api#length": {
              "min": 1
            },
```

```
    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific \n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
```

```
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
    "type": "structure",
    "members": {
        "Username": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

"IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
```

```
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
                }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
               }
            },
            "AssociationDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
               }
            },
            "DisassociationDate": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
         "type": "list",
```

```
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
```

```
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id",
                "content-length",

            "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
```

```
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
             ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [
                  {

                    "fn": "booleanEquals",
                    "argv": [
                      {
```

```
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "aws.partition",

                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
true
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
"fn": "booleanEquals",
                            "argv": [
                              true,
                              {
                                "fn": "getAttr",
                                "argv": [
                                  {
                                    "ref": "PartitionResult"
                                  },
                                  "supportsFIPS"
                                ]
                              }
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              true,
```

```
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]
                                    }

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }

    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [

 {
                            "ref": "UseFIPS"
                        },
                        true
                    ]
```

```
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "fn": "getAttr",
                                    "argv": [

        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {

    "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {

        "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]

          }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }

            ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
```

```
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect":
{
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
```

```
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",

      "UseFIPS": true,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
              "expect": {
                "endpoint":
{
                  "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
              }
            },
            {
              "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
              },
              "params": {
                "Region": "cn-north-1",
```

```
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
```

```
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
 false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
 disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
```

```
                }
              },
              {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "Missing region",
                "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
              "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
                }
            },
            "LicenseServers": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
                "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
                }
            },
            "CreationTime": {
                "target": "smithy.api#Timestamp",
                "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                "name": "PROVISIONING",
                "value": "PROVISIONING",
```

```
            "documentation": ""
          },
          {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
          },
          {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
```

```
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
```

```
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
</li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
               "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
              }
            },
             "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/instance/ListInstances"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
```

```
            }
          },
          "NextToken":
{
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/license-server/ListLicenseServerEndpoints"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "LicenseServerEndpoints"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
      "type": "structure",
      "members": {
```

```
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                  "smithy.api#range": {
                     "min": 1,
                     "max": 100
                  }
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

     "members": {
            "ProductUserSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
          },
          "errors": [
```

```
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListUserAssociations"
             },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "InstanceUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
```

```
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>Username</p>\n
</li>\n          <li>\n          <p>Domain</p>\n          </li>\n          </ul>"

        }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
```

```
 "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

          "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
              "target": "smithy.api#String",
              "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
              }
            },
            "SubscriptionEndDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
          "type": "structure",
          "members": {
            "RdsSalCredentialsProvider": {
```

```
        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
           }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
```

```
            "method": "POST",
            "uri": "/identity-provider/RegisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
```

```
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",

        "traits": {
              "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
              "smithy.api#length": {
                "min": 1
              }
            }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
          "type": "string",
          "traits": {
            "smithy.api#length": {
              "min": 5,
              "max": 200
            },
            "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
          "type": "structure",
          "members": {
            "Endpoint": {

           "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
          "type": "union",
          "members": {
            "RdsSalSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RDS_SAL",
            "value": "RDS_SAL",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },
```

```
        "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
             "traits": {
               "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/StopProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "ProductUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
```

```
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                "smithy.api#httpLabel": {},
```

```
                "smithy.api#required": {}
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
                "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#input": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
    "type": "structure",
    "members": {},
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#Tags": {
    "type": "map",
    "key": {
        "target": "smithy.api#String"
    },
    "value": {
        "target": "smithy.api#String"
    },
    "traits": {
        "smithy.api#length": {
            "min": 0,
            "max": 50
        },
        "smithy.api#sensitive": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
```

```
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "TagKeys": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                     "smithy.api#required": {}
                }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
```

```
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
```

```
        }
      }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
```

```
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
```

```
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
```

```
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
```

```
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
```

```
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
```

```
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
```

```
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType
```

```
//
The ID of the workspace to remove the Grafana Enterprise license from.
//
// This member is required.
WorkspaceId *string

noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

// A structure containing information about the workspace.
//
// This member is required.
Workspace *types.WorkspaceDescription

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
```

```
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
```

```
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
```

```
 return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
```

```
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
```

```
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string
```

```
 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go

Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod
```

```
// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}
```

```
func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
```

```
//
// Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
// trials.
//
// This member is required.
LicenseType types.LicenseType

// The ID of the workspace to associate the license with.
//
// This member is required.
WorkspaceId *string

// A token from Grafana Labs that ties your Amazon Web Services account with a
// Grafana Labs account. For more information, see [Link your account with Grafana Labs].
//
// [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
GrafanaToken *string

noSmithyDocumentSerde
}

type AssociateLicenseOutput
struct {

// A structure containing data about the workspace.
//
// This member is required.
Workspace *types.WorkspaceDescription

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
```

```
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
```

```
c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAttempt(stack, options); err !=
 nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
```

```
 OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
```

InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
```

```
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
```

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
```

```
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
            "smithy.api#required": {}
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/GetRegisteredSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
```

```
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
          }
        },
        "StatusMessage": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
          "traits": {
            "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
          }
        },
        "HomeRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
          }
        },
        "InstanceID": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
          }
        },
        "InstanceType": {
```

```
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
        },
        "AccountID": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
        },
        "Region": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
```

```
            },
            "SubscriptionName": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
               }
            },
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

     "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
      "type": "service",
      "version": "2018-05-10",
      "operations": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
        ],
        "traits": {
            "aws.api#service": {
                "sdkId": "License Manager Linux Subscriptions",
                 "arnNamespace": "license-manager-linux-subscriptions",
                "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
            },
            "aws.auth#sigv4": {
                "name": "license-manager-linux-subscriptions"
            },
            "aws.protocols#restJson1": {},
            "smithy.api#cors": {
                "additionalAllowedHeaders": [
                    "*",
                    "content-type",
                    "x-amz-content-sha256",
                    "x-amz-user-agent",
                    "x-amzn-platform-id",
                    "x-amzn-trace-id"
                ],
                "additionalExposedHeaders": [
                    "x-amzn-errortype",
                    "x-amzn-requestid",
                    "x-amzn-trace-id"
                ]
            },
            "smithy.api#documentation": "<p>With License Manager,
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager Linux Subscriptions",
            "smithy.rules#endpointRuleSet": {
                "version": "1.0",
                "parameters": {
                    "Region": {
                        "builtIn": "AWS::Region",
                        "required": false,
                        "documentation": "The AWS region used to dispatch the request.",
                        "type": "String"
                    },
                    "UseDualStack": {
```

```
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
             "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
```

```
        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
              "conditions": [],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseDualStack"
                        },
                        true
                      ]

}
                  ],
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [],
                  "endpoint": {
                    "url": {
                      "ref": "Endpoint"
                    },
                    "properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"

          }
          ],
          "type": "tree"
        },
        {
          "conditions": [],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
```

```
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

        "fn": "aws.partition",
                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {

                       "ref": "UseFIPS"
                          },
                          true
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }

  ],
                    "rules": [
                      {
                        "conditions": [
```

```
                                        {
                                          "fn": "booleanEquals",
                                          "argv": [
                                            true,
                                            {
                                              "fn": "getAttr",
                                              "argv": [
                                                {
                                                  "ref": "PartitionResult"

                    },
                                                "supportsFIPS"
                                              ]
                                            }
                                          ]
                                        },
                                        {
                                          "fn": "booleanEquals",
                                          "argv": [
                                            true,
                                            {
                                              "fn": "getAttr",
                                              "argv": [

                                               {
                                                  "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
                                              ]
                                            }
                                          ]
                                        }
                                      ],
                                      "rules": [
                                        {
                                          "conditions": [],

        "rules": [
                                            {
                                              "conditions": [],
                                              "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                              },
                                              "type": "endpoint"
                                            }
```

```
                                ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {

                "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsFIPS"
                                            ]
                                        },
                                        true
```

```
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS is enabled
 but this partition does not support FIPS",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true

                ]
                        }
                    ],
                    "rules": [
                        {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {

                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [

        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                          },
                          "type": "endpoint"
                        }
                      ],
                      "type": "tree"

                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
              }
            ],
            "type": "tree"
          },
```

```
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
    "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
    "expect": {
        "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
    },
    "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
    }
},
```

```
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
        }

  },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
```

```
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
       },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
```

```
"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-gov-east-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                  }

               },
                "params": {
                  "Region": "us-gov-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-gov-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
              },
              {

            "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
                  }
                },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
```

```
                "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },

            {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
                  },
                  "params": {
```

```
      "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
               }
            },
            {
               "documentation": "For custom endpoint with fips disabled and dualstack enabled",
               "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
               },
               "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
               }
            },
            {
               "documentation": "Missing region",

            "expect": {
                  "error": "Invalid Configuration: Missing Region"
               }
            }
         ],
         "version": "1.0"
      }
   }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
         },
         {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
         }
      ]
   }
},
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
```

```
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "Instances"
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
         "type": "structure",
         "members": {
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n           <li>\n              <p>\n                 <code>AccountID</code>\n
</p>\n           </li>\n           <li>\n              <p>\n                 <code>AmiID</code>\n              </p>\n           </li>\n
        <li>\n              <p>\n                 <code>DualSubscription</code>\n              </p>\n           </li>\n
<li>\n              <p>\n                 <code>InstanceID</code>\n              </p>\n           </li>\n           <li>\n
  <p>\n                 <code>InstanceType</code>\n              </p>\n           </li>\n           <li>\n              <p>\n
    <code>ProductCode</code>\n              </p>\n           </li>\n           <li>\n              <p>\n
<code>Region</code>\n              </p>\n           </li>\n           <li>\n              <p>\n
<code>Status</code>\n              </p>\n           </li>\n           <li>\n              <p>\n
<code>UsageOperation</code>\n              </p>\n           </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n              <p>\n                 <code>contains</code>\n              </p>\n           </li>\n           <li>\n
<p>\n                 <code>equals</code>\n              </p>\n           </li>\n           <li>\n
              <p>\n                 <code>Notequal</code>\n              </p>\n           </li>\n        </ul>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
               }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
            },
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
         "type": "structure",
         "members": {
            "Subscriptions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
               "traits": {
                  "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
         "type": "operation",
         "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
         },
         "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
         },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
               }
            }
         },

         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
         "type": "structure",
         "members": {
            "RegisteredSubscriptionProviders": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
               "traits": {
                  "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
         ],
         "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
               "method": "GET",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
         "type": "structure",
         "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}

               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
         "type": "structure",
         "members": {
            "tags": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {

"name": "Disabled",
          "value": "Disabled",
          "documentation": "Disabled OrganizationIntegration"
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
    "type": "list",
```

```
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/RegisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
              }
            },
            "SubscriptionProviderArn": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
```

```
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
                }
            },
             "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
\n\t\t\tthis is the status of the offline token.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription
\n\t\t\tprovider token status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {

                  "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed
third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and
license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider,
License Manager can get subscription data from the registered provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
                {
                    "name": "Successful",
```

```
            "value": "Successful",
            "documentation": "Successful status"
          },
          {
            "name": "Failed",
            "value": "Failed",
            "documentation": "Failed status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
       },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
```

```
            "Type": {
              "target": "smithy.api#String",
              "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
              }
            },
            "InstanceCount": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
              "traits": {
                "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
          "type": "list",

         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "RedHat",
                "value": "RedHat",
                "documentation": "RedHat subscription provider namespace"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
```

```
        "type":
"list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "ACTIVE",
              "value": "ACTIVE",
              "documentation": "ACTIVE status"
            },
            {
              "name": "INVALID",
              "value": "INVALID",
              "documentation": "INVALID status"
            },
            {
              "name": "PENDING",
              "value": "PENDING",
              "documentation": "PENDING status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                 "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
      "type": "map",
      "key":
{
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

   "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tagKeys": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input":
 {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
```

```
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
                }
            },
            "HomeRegions": {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and

do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all

other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.116 iputils-tracepath 20240905-r0

1.116.1 Available under license :

arping: GPL-2.0-or-later
clockdiff: BSD-3-Clause
ping: BSD-3-Clause
tracepath: GPL-2.0-or-later

Files containing license texts are available in Documentation directory.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This

General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price.
Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a

notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If
identifiable sections of that work
are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial distribution
and only if you
received the program in object code or executable form with such

an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source
code, even though third parties are not
compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing
or modifying
the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues),

conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any

later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively

convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

  <one line to give the program's name and a brief idea of what it does.>
  Copyright (C) <year> <name of author>

  This program is free software; you can redistribute it and/or modify
  it under the terms of the GNU
General Public License as published by
  the Free Software Foundation; either version 2 of the License, or
  (at your option) any later version.

  This program is distributed in the hope that it will be useful,
  but WITHOUT ANY WARRANTY; without even the implied warranty of
  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
  GNU General Public License for more details.

  You should have received a copy of the GNU General Public License along
  with this program; if not, write to the Free Software Foundation, Inc.,
  51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

  Gnomovision version 69, Copyright (C) year name of author
  Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
  This is free software, and you are welcome to redistribute
it
  under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the program
 `Gnomovision' (which makes passes at compilers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into

proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this
 is what you want to do, use the GNU Lesser General
Public License instead of this License.

1.117 github.com/aws/aws-sdk-go-v2/internal/configsources 1.4.6

1.117.1 Available under license :

GetLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions

```
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
```

```
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
```

```
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string

 // Product name.
 //
 // This member is required.
 ProductName *string
```

```
 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // Date and time range during which the license is valid, in ISO8601-UTC format.
 //
 // This member is required.
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
```

```
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
```

SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step

spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer

InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
          }
        },
        "ActiveDirectoryType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
          "traits": {
            "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Details about an Active Directory identity
```

```
provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                }
            },
            "DomainNetworkSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
```

```
            "smithy.api#enum": [
               {
                  "name": "SELF_MANAGED",
                  "value": "SELF_MANAGED",
                  "documentation": "SELF_MANAGED type of Active Directory"
               },
               {
                  "name": "AWS_MANAGED",
                  "value": "AWS_MANAGED",
                  "documentation": "AWS_MANAGED type of Active Directory"
               }
            ]
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                  "smithy.api#required": {}
               }
            },
             "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Domain": {
               "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
      },
      "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
           }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
          "smithy.api#error": "server"
        }
      },
```

```
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
            "type": "operation",
            "input": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
            },
            "output": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
            },
            "errors": [
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
                },

               {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
                },
                {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
                }
            ],
            "traits": {
                "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS)
license server.</p>",
                "smithy.api#http": {
                    "code": 200,
                    "method": "POST",
                    "uri": "/license-server/CreateLicenseServerEndpoint"
                },
                "smithy.api#idempotent": {}
            }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
            "type": "structure",
            "members": {
                "IdentityProviderArn": {
                    "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
             "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

 }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/DeleteLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
              "smithy.api#required": {}
            }
          },
           "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
```

```
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/DeregisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
```

```
{
        "type": "structure",
        "members": {
           "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                 "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
              }
           },
           "Product": {
              "target": "smithy.api#String",
              "traits": {
                 "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
              }
           },
           "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
              }
           }
        },
        "traits": {
           "smithy.api#input": {}
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
           "IdentityProviderSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
              "traits": {
                 "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                 "smithy.api#required": {}
              }
           }
        },
        "traits": {
           "smithy.api#output": {}

   }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/DisassociateUser"
        },
        "smithy.api#idempotent": {}
```

```
    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
      "type": "structure",
      "members": {
```

```
        "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
```

```
            "Value": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>Value of the filter.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
         "type": "union",
         "members": {
            "ActiveDirectoryIdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Settings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
    "type": "list",
    "member": {

      "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
    "type": "structure",
```

```
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                    "smithy.api#required": {}
                }
            },
            "Products": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
                 "traits": {
                    "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                    "smithy.api#required": {}
                }
            },
            "LastStatusCheckDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date of the last status check.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
```

```
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },

     "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
      }
    },
```

```
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

       "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
```

```
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
              "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
```

```
      }
    ],
    "rules": [
      {
        "conditions": [
          {
            "fn": "booleanEquals",
            "argv": [
              {
                "ref": "UseFIPS"
              },
              true
            ]
          }
        ],
        "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
        "type": "error"
      },
      {
        "conditions": [
          {

            "fn": "booleanEquals",
            "argv": [
              {
                "ref": "UseDualStack"
              },
              true
            ]
          }
        ],
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
        "type": "error"
      },
      {
        "conditions": [],
        "endpoint": {
          "url": {
            "ref": "Endpoint"
          },

"properties": {},
            "headers": {}
          },
          "type": "endpoint"
        }
      ],
      "type": "tree"
```

```
    },
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Region"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "aws.partition",

              "argv": [
                {
                  "ref": "Region"
                }
              ],
              "assign": "PartitionResult"
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
```

true

```
                    ]
                  },
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {
"fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          }
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsDualStack"
                            ]
                          }
                ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [],
                        "endpoint": {
                          "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                          "properties": {},
                          "headers": {}
                        },
                        "type": "endpoint"
```

```
                }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
                                "argv": [

    {
                                        "ref": "PartitionResult"
                                    },
                                    "supportsFIPS"
                                ]
                            },
                            true
                        ]
                    }
                ],
                "rules": [
```

```
                                    {
                                        "conditions": [],
                                        "endpoint": {

                "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "FIPS is enabled but this partition does not support FIPS",
                                "type": "error"

}
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseDualStack"
                                        },
                                        true
                                    ]
                                }
                            ],
                            "rules": [
                                {

        "conditions": [
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [
                                                        {
                                                            "ref": "PartitionResult"
                                                        },
```

```
                                        "supportsDualStack"
                                    ]

        }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }

                    ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "endpoint": {
                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
    }
],
"type": "tree"
},
{
```

```
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ]
          },
          "smithy.rules#endpointTests": {
            "testCases": [
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "us-east-1",

        "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
```

```
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
```

```
{
                    "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": false,
                 "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                }
            },
            "params": {
                "Region": "us-gov-east-1",
                "UseFIPS": true,
                "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
         "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
```

```
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
```

```
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true,
        "Endpoint": "https://example.com"
       }
    },
    {
      "documentation": "Missing region",
      "expect": {
        "error": "Invalid Configuration: Missing Region"
      }
    }
  ],
  "version": "1.0"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "smithy.api#String",
              "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
              }
            },
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>"
```

```
            }
        },
        "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
                "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network \n\t\t\taddress of the RDS license server endpoint.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
                "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is one.</p>"
            }
        },
        "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
          "type": "string"
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "PROVISIONING",
                "value": "PROVISIONING",
                "documentation": ""
              },
              {
                "name": "PROVISIONING_FAILED",

               "value": "PROVISIONING_FAILED",
                "documentation": ""
              },
              {
                "name": "PROVISIONED",
                "value": "PROVISIONED",
                "documentation": ""
              },
              {
                "name": "DELETING",
                "value": "DELETING",
                "documentation": ""
              },
              {
                "name": "DELETION_FAILED",
                "value": "DELETION_FAILED",
                "documentation": ""
```

```
            },
            {
                "name": "DELETED",
                "value": "DELETED",
                "documentation": ""
            }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "HEALTHY",
                "value": "HEALTHY",
                "documentation": ""
            },
            {
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
            },
            {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
            }
        ]
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
    "type": "structure",
    "members": {
        "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
            }
        },
        "ServerSettings": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings for your \n\t\t\tserver.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based subscriptions.</p>",
          "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/ListIdentityProviders"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "IdentityProviderSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Product</p>\n          </li>\n          <li>\n            <p>DirectoryId</p>\n
</li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "NextToken":
{
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Status</p>\n            </li>\n            <li>\n                <p>InstanceId</p>\n
</li>\n        </ul>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
      "type": "structure",
      "members": {
        "InstanceSummaries": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
          "traits": {
            "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output":
{}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/ListLicenseServerEndpoints"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "LicenseServerEndpoints"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>IdentityProviderArn</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
             "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
```

\n\tfrom a previously truncated response. "
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoints": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
            "traits": {
              "smithy.api#documentation": " An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects. "
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {

   "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
```

```
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions
operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
```

```
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

   "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
      "smithy.api#http": {
        "method": "GET",
        "uri": "/tags/{ResourceArn}"
       },
      "smithy.api#readonly": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
    "type": "structure",
    "members": {
      "ResourceArn": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
        "traits": {
          "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
          "smithy.api#httpLabel": {},
          "smithy.api#required": {}
        }
      }
    },
    "traits": {
```

```
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
           "traits": {
             "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/ListUserAssociations"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "InstanceUserSummaries"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"
```

```
        }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
              }
            },
            "NextToken": {
              "target":
 "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                "smithy.api#required": {}
              }
```

```
        },
        "Product": {

      "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of a product for this user.</p>",
            "smithy.api#required": {}
          }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
          }
        },
        "SubscriptionStartDate": {
          "target": "smithy.api#String",
          "traits": {
```

```
  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
                }
            },
            "SubscriptionEndDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The end date of a subscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific
user.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
            "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
             }
          ],
          "traits": {
             "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
             "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
             },
             "smithy.api#idempotent": {}
          }
       },
       "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
          "type": "structure",
          "members": {
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                   "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                   "smithy.api#required": {}
                }
             },

         "Product": {
                "target": "smithy.api#String",
                "traits": {
                   "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}
}
},
"Settings": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
"traits": {
"smithy.api#documentation": " The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints. "
}
},
"Tags": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
"traits": {
"smithy.api#documentation": " The tags that apply to the identity provider's registration. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the results of an identity provider
operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
"type": "string",
"traits": {
"smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
}
},

```
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
        "smithy.api#error": "client",
        "smithy.api#httpError": 404
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
      "type": "structure",
      "members": {
        "SecretId": {
          "target": "smithy.api#String",

      "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {
```

```
        "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
```

```
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
```

```
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                "smithy.api#required": {}

             }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
          "type": "structure",
          "members": {
            "ProductUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
        "smithy.api#http":
 {
          "code": 200,
          "method": "POST",
          "uri": "/user/StopProductSubscription"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
              "smithy.api#required": {}
            }
          }
```

```
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
               "method": "PUT",
               "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
         "members": {
            "ResourceArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                  "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
            "smithy.api#http": {
              "method": "DELETE",
              "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
          "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "TagKeys": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
          },
```

```
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
                }
            },
```

```
        "UpdateSettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
```

```
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
          }
        }
      }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
```

```
 params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
```

```
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
```

```
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
```

```
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
```

```
//
//   - ProductSKU
//
//   - Fingerprint
//
//   - Status
Filters
[]types.Filter

// Amazon Resource Names (ARNs) of the licenses.
LicenseArns []string

// Maximum number of results to return in a single call.
MaxResults *int32

// Token for the next set of results.
NextToken *string

noSmithyDocumentSerde
}

type ListLicensesOutput struct {

// License details.
Licenses []types.License

// Token for the next set of results.
NextToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
```

```
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
```

```
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
```

```
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
```

```
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
```

```
 ServiceID:     ServiceID,
 OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}
```

```
type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
```

```
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
```

```
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
```

```
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {
```

```
//
Checkout type.
//
// This member is required.
CheckoutType types.CheckoutType

// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
// This member is required.
ClientToken *string

// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string
```

```
// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
```

```
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
```

```
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
```

```
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
```

```
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {
```

```
// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
```

```
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options)) (*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}
```

```
type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
```

```
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {
```

```
 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
```

SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
```

```
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
```

ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },
```

```
    {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
```

```
            }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
                    "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
                }
            },
            "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
```

```
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
               "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
```

```
                "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
        },
        "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
                "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
        },
        "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
        },
```

```
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for \n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
```

```
"type": "service",
"version": "2018-05-10",
"operations": [
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
     },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
],
"traits": {
    "aws.api#service": {
        "sdkId": "License Manager Linux Subscriptions",
         "arnNamespace": "license-manager-linux-subscriptions",
        "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
        "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
```

```
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
                 "type": "Boolean"
              },
              "UseFIPS": {
                "builtIn": "AWS::UseFIPS",
                "required": true,
                "default": false,
                "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                "type": "Boolean"
              },
              "Endpoint": {
                "builtIn": "SDK::Endpoint",
                "required": false,
                "documentation": "Override the endpoint used to send this request",
                "type": "String"
              }
```

```
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }

    ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]

}
                    ],
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                    "type": "error"
```

```
            },
            {
              "conditions": [],
              "endpoint": {
                "url": {
                  "ref": "Endpoint"
                },
                "properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ],
          "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Region"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {

    "fn": "aws.partition",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ],
                "assign": "PartitionResult"
              }
            ],
            "rules": [
```

```
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {

                    "ref": "UseFIPS"
                        },
                        true
                      ]
                    },
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseDualStack"
                        },
                        true
                      ]
                    }

],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [
                                {
                                  "ref": "PartitionResult"

},
                                    "supportsFIPS"
                                ]
                              }
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              true,
                              {
                                "fn": "getAttr",
```

```
                                        "argv": [

                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],

    "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
```

```
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {

                "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "fn": "getAttr",
                                            "argv": [
                                                {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsFIPS"
                                            ]
                                        },
                                        true

                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"
                                }
                            ],
                            "type": "tree"
```

```
                },
                {
                  "conditions": [],
                  "error": "FIPS is enabled
but this partition does not support FIPS",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true

          ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {

                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]
                        }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "rules": [
```

```
        {
                                                "conditions": [],
                                                "endpoint": {
                                                   "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                   "properties": {},
                                                   "headers": {}
                                                },
                                                "type": "endpoint"
                                             }
                                          ],
                                          "type": "tree"

                                    }
                                       ],
                                       "type": "tree"
                                    },
                                    {
                                       "conditions": [],
                                       "error": "DualStack is enabled but this partition does not support DualStack",
                                       "type": "error"
                                    }
                                 ],
                                 "type": "tree"
                              },
                              {
                                 "conditions": [],
                                 "rules": [
                                    {
                                       "conditions": [],
                                       "endpoint": {
                                          "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                          "properties": {},
                                          "headers": {}
                                       },
                                       "type": "endpoint"
                                    }
                                 ],
                                 "type": "tree"
                              }
                           ],
                           "type": "tree"
                        }
                     ],
                     "type": "tree"
                  },
                  {
```

```
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
              }
            ],
            "type": "tree"
          }
        ]
      },
      "smithy.rules#endpointTests": {
        "testCases": [
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {

         "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }

      },
      "params": {
        "Region": "us-gov-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {

    "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }

        },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
```

```
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://example.com"
                }
            },
            "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "Missing region",
```

```
                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
                }
            ],
            "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled LinuxSubscriptionsDiscovery"
          },
          {
            "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled LinuxSubscriptionsDiscovery"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
      "type": "structure",
      "members": {
        "SourceRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "OrganizationIntegration": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
          "traits": {
            "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
```

```
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
```

```
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
            <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional
 objects.</p>"
              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Subscriptions"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
              },
              "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
              },
              "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                    "min": 1,
                    "max": 16384
                  }
                }
              }
            },
            "traits": {
              "smithy.api#documentation": "NextToken
       length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
            }
          },
          "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
            "type": "structure",
            "members": {
              "Subscriptions": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"

            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
"<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
```

```
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
```

```
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}

            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "EQUAL",
              "value": "Equal",
              "documentation": "Equal operator"
            },
            {
              "name": "NOT_EQUAL",
              "value": "NotEqual",
              "documentation": "Not equal operator"
            },
            {
              "name": "CONTAINS",
              "value": "Contains",
              "documentation": "Contains operator"
            }
          ],
```

```
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {

                "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
```

```
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
              }
            },
            "SubscriptionProviderArn": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
```

```
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
```

```
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
                {
                    "name": "Successful",
                    "value": "Successful",
                    "documentation": "Successful status"
                },
                {
                    "name": "Failed",
                    "value": "Failed",
                    "documentation": "Failed status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#length": {
                    "min": 1,
                    "max": 100
                }
            }
```

```
        },
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            },
            "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the subscription.</p>"
                }
            },
            "Type": {
                "target": "smithy.api#String",
                "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
                }
            },
            "InstanceCount": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
                "traits": {
                    "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
```

```
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
              "method": "PUT",
              "uri": "/tags/{resourceArn}"
            },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
```

```
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

  "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
{}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
```

```
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
          }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
              }

    },
            "Status": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
              }
            },
            "StatusMessage": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
              "traits": {
                "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
              }
            },
            "HomeRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
              }
             }
          }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
          }
      }
  }
```

}

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain

separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without

modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include

the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt

RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.118 stdlib go1.25.0

1.118.1 Available under license :

```
// Copyright 2024 The Go Authors. All rights reserved.
// Use of this source code is governed by a BSD-style
// license that can be found in the LICENSE file.

package copyright

import (
 "bytes"
 "internal/testenv"
 "io"
 "io/fs"
 "os"
 "path/filepath"
 "testing"
)

var copyright = []byte("Copyright")
```

```
var permitted = [][]byte{
 []byte("// Code generated by "),
 []byte("// Code generated from "),
 []byte("// Created by cgo -cdefs"),
 []byte("// DO NOT EDIT\n// generated by:"),
 []byte("// Empty assembly file"),
 []byte("// Generated using cgo"),
 []byte("// Original source:\n//\thttp://www.zorinaq.com/papers/md5-amd64.html"), // public domain crypto/md5
 []byte("// created by cgo -cdefs"),
 []byte("// go run mkasm.go"),
 []byte("// mkerrors"),
 []byte("// mksys"),
 []byte("// run\n// Code generated by"), // cmd/compile/internal/test/constFold_test.go
}

func TestCopyright(t *testing.T) {
 buf := make([]byte, 2048)
 filepath.WalkDir(filepath.Join(testenv.GOROOT(t), "src"), func(path string,
 d fs.DirEntry, err error) error {
  if d.IsDir() && (d.Name() == "testdata" || d.Name() == "vendor") {
   return filepath.SkipDir
  }
  switch filepath.Ext(d.Name()) {
  default:
   return nil
  case ".s", ".go":
   // check
  }

  f, err := os.Open(path)
  if err != nil {
   t.Error(err)
   return nil
  }
  defer f.Close()
  n, err := f.Read(buf)
  if err != nil && err != io.EOF {
   t.Error(err)
   return nil
  }
  b := buf[:n]
  if bytes.Contains(b, copyright) {
   return nil
  }
  for _, ok := range permitted {
   if bytes.HasPrefix(b, ok) {
    return nil
```

```
  }
 }
 t.Errorf("%s: missing copyright notice", path)
 return nil
})
}
```

Copyright 2009 The Go Authors.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google LLC nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE
 FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
The Go source code and supporting files in this directory
are covered by the usual Go license (see ../../../../LICENSE).

When building with GOEXPERIMENT=boringcrypto, the following applies.

The goboringcrypto_linux_amd64.syso object file is built
from BoringSSL source code by build/build.sh and is covered
by the BoringSSL license reproduced below and also at
https://boringssl.googlesource.com/boringssl/+/fips-20220613/LICENSE.

BoringSSL is a fork of OpenSSL. As such, large parts of it fall under OpenSSL
licensing. Files that are completely new have a Google copyright and an ISC
license. This license is reproduced at the bottom of this file.

Contributors to BoringSSL are required to follow the CLA rules for Chromium:
https://cla.developers.google.com/clas

Some files from Intel are under yet another license, which is also included
underneath.

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the
OpenSSL License and the original SSLeay license apply to the toolkit.
 See below
for the actual license texts. Actually both licenses are BSD-style Open Source
licenses. In case of any license issues related to OpenSSL please contact
openssl-core@openssl.org.

The following are Google-internal bug numbers where explicit permission from
some authors is recorded for use of their work. (This is purely for our own
record keeping.)
 27287199
 27287880
 27287883

 OpenSSL License

/* ==
* Copyright (c) 1998-2011 The OpenSSL Project. All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
*
* 1. Redistributions of source code must retain the above copyright
*   notice, this list of conditions and the following disclaimer.
*
* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following
 disclaimer in
*   the documentation and/or other materials provided with the
*   distribution.
*
* 3. All advertising materials mentioning features or use of this
*   software must display the following acknowledgment:
*   "This product includes software developed by the OpenSSL Project
*   for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
*
* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
*   endorse or promote products derived from this software without
*   prior written permission. For written permission, please contact
*   openssl-core@openssl.org.

*
* 5. Products derived from this software may not be called "OpenSSL"
*   nor may "OpenSSL" appear in their names without prior written
*   permission of the OpenSSL Project.
*
* 6. Redistributions of any form whatsoever must retain the following
*   acknowledgment:
*   "This product includes software developed by the OpenSSL Project
*   for use in the OpenSSL Toolkit
 (http://www.openssl.org/)"
*
* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY
* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR
* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY OF SUCH DAMAGE.
* ==
*
* This product includes cryptographic software written by Eric Young
* (eay@cryptsoft.com). This product
 includes software written by Tim
* Hudson (tjh@cryptsoft.com).
*
*/

Original SSLeay License

/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
* All rights reserved.
*
* This package is an SSL implementation written
* by Eric Young (eay@cryptsoft.com).
* The implementation was written so as to conform with Netscapes SSL.
*
* This library is free for commercial and non-commercial use as long as
* the following conditions are aheared to. The following conditions
* apply to all code found in this distribution, be it the RC4, RSA,
* lhash, DES, etc., code; not just the SSL code. The SSL documentation
* included with this distribution is covered by the same copyright terms
* except that the holder is Tim Hudson (tjh@cryptsoft.com).

```
*
* Copyright remains Eric Young's, and as such any Copyright notices in
* the code are not to be removed.
* If this package is used in a product, Eric Young should be given attribution
* as the author of
 the parts of the library used.
* This can be in the form of a textual message at program startup or
* in documentation (online or textual) provided with the package.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the copyright
*    notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*    notice, this list of conditions and the following disclaimer in the
*    documentation and/or other materials provided with the distribution.
* 3. All advertising materials mentioning features or use of this software
*    must display the following acknowledgement:
*    "This product includes cryptographic software written by
*     Eric Young (eay@cryptsoft.com)"
*    The word 'cryptographic' can be left out if the rouines from the library
*    being used are
 not cryptographic related :-).
* 4. If you include any Windows specific code (or a derivative thereof) from
*    the apps directory (application code) you must include an acknowledgement:
*    "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
*
* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED.  IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
 POSSIBILITY OF
* SUCH DAMAGE.
*
* The licence and distribution terms for any publically available version or
* derivative of this code cannot be changed.  i.e. this code cannot simply be
* copied and put under another distribution licence
* [including the GNU Public Licence.]
*/
```

ISC license used for completely new code in BoringSSL:

/* Copyright (c) 2015, Google Inc.
*
* Permission to use, copy, modify, and/or distribute this software for any
* purpose with or without fee is hereby granted, provided that the above
* copyright notice and this permission notice appear in all copies.
*
* THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
* WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
* MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
* SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
* WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION
* OF CONTRACT, NEGLIGENCE
OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
* CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE. */

Some files from Intel carry the following license:

Copyright (c) 2012, Intel Corporation
#
All rights reserved.
#
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:
#
* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
#
* Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the
distribution.
#
* Neither the name of the Intel Corporation nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.
#
#
THIS SOFTWARE IS PROVIDED BY INTEL CORPORATION
""AS IS"" AND ANY
EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL INTEL CORPORATION OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,

PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR
PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
People who have agreed to one of the CLAs and can contribute patches.
The AUTHORS file lists the copyright holders; this file
lists people. For example, Google employees are listed here
but not in AUTHORS, because Google holds the copyright.
#
https://developers.google.com/open-source/cla/individual
https://developers.google.com/open-source/cla/corporate
#
Names should be added to this file as:
Name <email address>
Raul Silvera <rsilvera@google.com>
Tipp Moseley <tipp@google.com>
Hyoun Kyu Cho <netforce@google.com>
Martin Spier <spiermar@gmail.com>
Taco de Wolff <tacodewolff@gmail.com>
Andrew Hunter <andrewhhunter@gmail.com>
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE

OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain

separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without

modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include

the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Copyright (c) 2015 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Copyright 2015 The Go Authors.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google LLC nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE
 FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright 2009-2017 Andrea Leofreddi <a.leofreddi@vleo.net>. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are
permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its
   contributors may be used to endorse or promote products derived from
   this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS" AND ANY
EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY
AND FITNESS FOR A PARTICULAR

PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL COPYRIGHT HOLDERS OR
CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED
AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN
IF
ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The views and conclusions contained in the software and documentation are those of the
authors and should not be interpreted as representing official policies, either expressed
or implied, of Andrea Leofreddi.

1.119 github.com/aws/aws-sdk-go-v2/feature/dynamodb/attributevalue 1.20.9

1.119.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop

```
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
```

```
 return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
 //
 // This member is required.
 Issuer *types.Issuer

 // License name.
 //
 // This member is required.
 LicenseName *string
```

```
// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
```

```
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
```

```
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
```

RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning

```
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {
```

```
 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
  - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
```

```
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
   "smithy": "2.0",
   "shapes": {
      "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
            "DirectoryId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
                "traits": {
                    "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
                }
            },
            "ActiveDirectorySettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
                }
            },
            "ActiveDirectoryType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n <note>\n <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n </note>",
        "smithy.api#http":
```

```
{
            "code": 200,
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
subscription.</p>",
              "smithy.api#required": {}
            }
          },
           "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {
```

```
    "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },

        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
```

```
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
          ],
          "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
      "type": "structure",
      "members": {
        "LicenseServerEndpointArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) that identifies the identity provider to deregister. "
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#documentation": " Metadata that describes the results of an identity provider operation. ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}

}
},
"com.amazonaws.licensemanagerusersubscriptions#Directory": {
"type": "string",
"traits": {
"smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
}
},
"com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
},

```
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
              }
            },
            "InstanceUserArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
```

```
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
```

```
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
              "smithy.api#required": {}
            }
          },
           "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the
identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
```

```
            },
            "Products": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                  "smithy.api#required": {}
               }
            },
            "LastStatusCheckDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The date of the last status check.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
```

```
            }
        },

    "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
           "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

      "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
```

```
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

           "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
              "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
```

```
            "builtIn": "AWS::UseDualStack",
            "required": true,
            "default": false,
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
            "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
```

```
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [
                  {

                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
```

```
                {
                  "fn": "aws.partition",

                 "argv": [
                    {
                      "ref": "Region"
                    }
                  ],
                  "assign": "PartitionResult"
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },

true
                      ]
                    },
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseDualStack"
                        },
                        true
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {

"fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [
                                {
                                  "ref": "PartitionResult"
                                },
```

```
                                "supportsFIPS"
                            ]
                        }
                    ]
                },

            {
                "fn": "booleanEquals",
                "argv": [
                    true,
                    {
                        "fn": "getAttr",
                        "argv": [
                            {
                                "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                        ]
                    }

        ]
                }
            ],
            "rules": [
                {
                    "conditions": [],
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [

{
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "fn": "getAttr",
                            "argv": [

                {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        },
                        true
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {

          "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
```

```
                    "error": "FIPS is enabled but this partition does not support FIPS",
                    "type": "error"

  }
                ],
                "type": "tree"
              },
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {

      "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsDualStack"
                            ]

       }
                          ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
```

```
                                    },
                                    "type": "endpoint"
                                }

                            ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "Invalid Configuration: Missing Region",
                "type": "error"
            }
        ]
    },
    "smithy.rules#endpointTests": {
        "testCases": [
            {
                "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
                "expect":
{
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                    }
```

```
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-east-1",

    "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
```

```
                {
                  "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS":
true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
                    }
```

```
    },
    "params": {
      "Region": "cn-north-1",
      "UseFIPS": false,
       "UseDualStack": false
    }
  },
  {
    "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
      }
    },
    "params": {
      "Region": "us-gov-east-1",
      "UseFIPS": true,
      "UseDualStack": true
    }
  },
  {
    "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
    "expect": {
      "endpoint":
{
        "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
      }
    },
    "params": {
      "Region": "us-gov-east-1",
      "UseFIPS": true,
      "UseDualStack": false
    }
  },
  {
    "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
    "expect": {
      "endpoint": {
        "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
      }
    },
    "params": {
      "Region": "us-gov-east-1",
      "UseFIPS": false,
       "UseDualStack": true
    }
  },
  {
```

```
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
 false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
```

```
                "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                "expect": {
                  "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": true,
                  "UseDualStack": false,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                "expect": {
                  "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "Missing region",
                "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
              "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
          },
          "HealthStatus": {
            "target":
```

```
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                    "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
                }
            },
            "Ipv4Address": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
                }
```

```
            },
            "LicenseServerEndpointId": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
               }
            },
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
               }
            },
            "LicenseServerEndpointProvisioningStatus": {
               "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
               }
            },
            "LicenseServers": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
               }
            },
            "CreationTime": {
               "target": "smithy.api#Timestamp",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
         "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
         "type": "list",
         "member": {
```

```
      "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "PROVISIONING",
          "value": "PROVISIONING",
          "documentation": ""
        },
        {
          "name": "PROVISIONING_FAILED",

         "value": "PROVISIONING_FAILED",
          "documentation": ""
        },
        {
          "name": "PROVISIONED",
          "value": "PROVISIONED",
          "documentation": ""
        },
        {
          "name": "DELETING",
          "value": "DELETING",
          "documentation": ""
        },
        {
          "name": "DELETION_FAILED",
          "value": "DELETION_FAILED",
          "documentation": ""
        },
        {
          "name": "DELETED",
          "value": "DELETED",
          "documentation": ""
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
    "type": "string",
     "traits": {
      "smithy.api#enum": [
        {
          "name": "HEALTHY",
          "value": "HEALTHY",
```

```
                "documentation": ""
              },
              {
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "IdentityProviderSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
          "type": "structure",
          "members": {
```

```
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Product</p>\n          </li>\n          <li>\n          <p>DirectoryId</p>\n
</li>\n       </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources
that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                  "smithy.api#required": {}
               }
            },
             "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
```

empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects. "
                }
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": " List the Remote Desktop Services (RDS) License Server endpoints
",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",

```
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
                }
            },
            "NextToken": {
                 "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
        "type": "structure",
        "members": {
            "LicenseServerEndpoints": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
```

```
            }
          },
           "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
```

```
  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "ProductUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n          </li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
               }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
         "type": "structure",

       "members": {
            "ProductUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
             },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
          }
        },
        "Filters": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
          "traits": {
            "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

      }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
```

```
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

           "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
```

```
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                "smithy.api#required": {}
              }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
              }
            },
            "SubscriptionStartDate": {
              "target": "smithy.api#String",
              "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
              }
            },
            "SubscriptionEndDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
          "type": "list",
```

```
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                  "smithy.api#required": {}
               }
            },

          "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
                  "smithy.api#required": {}
               }
            },
            "Settings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
               "traits": {
                  "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
```

```
            "target": "smithy.api#String",

        "traits": {
            "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
            "smithy.api#length": {
              "min": 1
            }
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
      "type": "string",
      "traits": {
        "smithy.api#length": {
          "min": 5,
          "max": 200
        },
        "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
      "type": "structure",
      "members": {
        "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
      "type": "union",
      "members": {
        "RdsSalSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
```

```
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
                }
              }
            },
            "traits": {
              "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
            "type": "string",
            "traits": {
              "smithy.api#enum": [
                {
                  "name": "RDS_SAL",
                  "value": "RDS_SAL",
                  "documentation": ""
                }
              ]
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
            "type": "structure",
            "members": {
              "message": {
                "target": "smithy.api#String"
              }
            },
            "traits": {
              "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
              "smithy.api#error": "client"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#Settings": {

        "type": "structure",
            "members": {
              "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                  "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                  "smithy.api#length": {
                    "min": 1
                  },
                  "smithy.api#required": {}
                }
              },
              "SecurityGroupId": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
          "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity provider.</p>\n         <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
```

```
for whom to start the product \n\t\t\tsubscription.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                 "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

   "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/StopProductSubscription"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
```

```
            },
            "ProductUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
               }
             }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
         "type": "list",
         "member": {
            "target": "smithy.api#String"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
 {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
         }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#Subnets": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
        "target": "smithy.api#String"
    },
    "traits": {
        "smithy.api#length": {
            "min": 0,
            "max": 50
        },
        "smithy.api#sensitive": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResource": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
     },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
```

```
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
```

```
            }
          },
          "TagKeys": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
              "smithy.api#httpQuery": "tagKeys",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/UpdateIdentityProviderSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
          "type": "structure",
           "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
              }
            },
            "UpdateSettings":
 {
              "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
              "traits": {
                "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
  }
```


DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash

```
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
```

```
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
```

```
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
```

```
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
```

```
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
```

```
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
```

```
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
```

```
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
```

```
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string
```

```
 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
```

```
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
```

```
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
```

```
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
```

```
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
```

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above

copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

```
type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
```

```
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
```

```
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
```

```
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
```

Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },

    {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
```

```
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
```

```
        "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
               "traits": {
                  "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
               }
            },
            "HomeRegions": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                  "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
               }
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
         "type": "structure",
         "members": {
            "AmiId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
               }
            },
            "InstanceID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
               }
            },
            "InstanceType": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The instance type of the resource.</p>"
               }
            },
            "AccountID": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
```

```
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

   "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
```

```
            "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
          "type": "service",
          "version": "2018-05-10",
          "operations": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
             },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
            }
          ],
          "traits": {
            "aws.api#service": {
              "sdkId": "License Manager Linux Subscriptions",
               "arnNamespace": "license-manager-linux-subscriptions",
              "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
```

```
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
```

```
      "Endpoint": {
        "builtIn": "SDK::Endpoint",
        "required": false,
        "documentation": "Override the endpoint used to send this request",
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }

],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
```

```
                                ]

}
                            ],
                            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                            "type": "error"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": {
                                    "ref": "Endpoint"
                                },
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"

                }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "isSet",
                                "argv": [
                                    {
                                        "ref": "Region"
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {

                "fn": "aws.partition",
                                        "argv": [
                                            {
                                                "ref": "Region"
```

```
                }
            ],
            "assign": "PartitionResult"
        }
    ],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {

                    "ref": "UseFIPS"
                        },
                        true
                    ]
                },
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }

],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"

},
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
```

```
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [

                                                     {
                                                            "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],

        "rules": [
                                                {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],

                                "type": "tree"
                                            }
                                        ],
                                        "type": "tree"
                                    },
                                    {
                                        "conditions": [],
                                        "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",

                                        "type": "error"
                                    }
                                ],
                                "type": "tree"
                            },
```

```
                                {

                "conditions": [
                                        {
                                           "fn": "booleanEquals",
                                           "argv": [
                                              {
                                                 "ref": "UseFIPS"
                                              },
                                              true
                                           ]
                                        }
                                     ],
                                     "rules": [
                                        {
                                           "conditions": [
                                              {

                              "fn": "booleanEquals",
                                                 "argv": [
                                                    {
                                                       "fn": "getAttr",
                                                       "argv": [
                                                          {
                                                             "ref": "PartitionResult"
                                                          },
                                                          "supportsFIPS"
                                                       ]
                                                    },
                                                    true

                                               ]
                                              }
                                           ],
                                           "rules": [
                                              {
                                                 "conditions": [],
                                                 "rules": [
                                                    {
                                                       "conditions": [],
                                                       "endpoint": {
                                                          "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                          "headers": {}
                                                       },
                                                       "type": "endpoint"
```

```
                    }
                  ],
                  "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "FIPS is enabled
but this partition does not support FIPS",
              "type": "error"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true

      ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    true,
                    {
                      "fn": "getAttr",
                      "argv": [
                        {

                          "ref": "PartitionResult"
                        },
                        "supportsDualStack"
                      ]
                    }
                  ]
                }
```

```
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],
                                            "type": "tree"

                        }
                                    ],
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
```

```
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

  }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

   "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
            }

      },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
          }

        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }

      },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
```

```
                    "url": "https://example.com"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },

    {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
                "endpoint": {
                    "url": "https://example.com"
                }
            },
            "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
            }
        },
        {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
```

```
                }
              },
              {
                "documentation": "Missing region",

              "expect": {
                    "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "Enabled",
              "value": "Enabled",
              "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
              "name": "Disabled",
              "value": "Disabled",
              "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
          "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
              "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Instances"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
          "type": "structure",
          "members": {
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
</p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
            <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
<li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
<code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
<p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
                <p>\n                    <code>Notequal</code>\n                </p>\n            </li>\n        </ul>"
               }
            },
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                     "min": 1,
                     "max": 16384
                  }
               }
            }
         },
         "traits": {
            "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
         "type": "structure",
```

```
        "members": {
            "Instances": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
                "traits": {
                    "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
```

```
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Subscriptions"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
                "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
      "type": "structure",
      "members": {
        "Subscriptions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
          "traits": {
            "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
```

```
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

     "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
              }
            }
          },

          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
          "type": "structure",
          "members": {
            "RegisteredSubscriptionProviders": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
```

```
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
```

```
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

            "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
 subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
 Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
             },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
```

```
                "min": 1,
                "max": 100
            }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
          }
        }
      },
```

```
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
```

```
                "value": "INVALID",
                "documentation": "INVALID status"
              },
              {
                "name": "PENDING",
                "value": "PENDING",
                "documentation": "PENDING status"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
```

```
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
```

```
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
      "type": "structure",
```

```
    "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
 {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
```

```
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
              }
            }

          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
          "type": "structure",
```

```
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
```

```
            "smithy.api#error": "client"
          }
        }
      }
    }
}
```

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step

spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.120 compress 1.18.0

1.120.1 Available under license :

Copyright (c) 2015, Pierre Curto
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.

* Neither the name of xxHash nor the names of its
 contributors may be used to endorse or promote products derived from
 this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR
 CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER
CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
This is the official list of people who can contribute
(and typically have contributed) code to the Snappy-Go repository.
The AUTHORS file lists the copyright holders; this file
lists people. For example, Google employees are listed here
but not in AUTHORS, because Google holds the copyright.
#
The submission process automatically checks to make sure
that people submitting code are listed in this file (by email address).
#
Names should be added to this file only after verifying that
the individual or the individual's organization has agreed to
the appropriate Contributor License Agreement, found here:
#
http://code.google.com/legal/individual-cla-v1.0.html
http://code.google.com/legal/corporate-cla-v1.0.html
#
The agreement for individuals can be filled out on the web.
#
When adding J Random Contributor's name to this file,
either J's name or J's organization's name should be
added to the AUTHORS file, depending on whether the
individual or corporate
 CLA was used.

Names should be added to this file like so:
Name <email address>

Please keep the list sorted.

Alex Legg <alexlegg@google.com>
Damian Gryski <dgryski@gmail.com>
Eric Buth <eric@topos.com>
Jan Mercl <0xjnml@gmail.com>

Jonathan Swinney <jswinney@amazon.com>
Kai Backman <kaib@golang.org>
Klaus Post <klauspost@gmail.com>
Marc-Antoine Ruel <maruel@chromium.org>
Nigel Tao <nigeltao@golang.org>
Rob Pike <r@golang.org>
Rodolfo Carvalho <rhcarvalho@gmail.com>
Russ Cox <rsc@golang.org>
Sebastien Binet <seb.binet@gmail.com>
The MIT License (MIT)

Copyright (c) 2015 Klaus Post

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN
CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
The MIT License (MIT)

Copyright (c) 2016 Evan Huus
Copyright (c) 2023 Klaus Post

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,

FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (c) 2011 The Snappy-Go Authors. All rights reserved.
Copyright (c) 2019 Klaus Post. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright 2016 The filepathx Authors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR

COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial

revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2016-2017 The New York Times Company

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

Copyright (c) 2016 Caleb Spare

MIT License

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Copyright (c) 2012 The Go Authors. All rights reserved.

Copyright (c) 2019 Klaus Post. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE
 ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Files: gzhttp/*

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright
owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common

control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation
of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version
of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity

on behalf of whom a Contribution has been received
by Licensor and
subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
copyright license to reproduce, prepare Derivative Works of,
publicly display, publicly perform, sublicense, and distribute the
Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
this License, each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
(except as stated in this section) patent license to make, have made,
use, offer to sell, sell, import, and otherwise transfer the Work,
where such license applies only to those patent claims licensable
by such Contributor that are necessarily infringed by their
Contribution(s)
alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files;
and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained
within such NOTICE file, excluding those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally
appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall
be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS
FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct, indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't
include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright 2016-2017 The New York Times Company

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and
limitations under the License.

Files: s2/cmd/internal/readahead/*

The MIT License
(MIT)

Copyright (c) 2015 Klaus Post

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH
THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.

Files: snappy/*
Files: internal/snapref/*

Copyright (c) 2011 The Snappy-Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its

contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED
TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Files: s2/cmd/internal/filepathx/*

Copyright 2016 The filepathx Authors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Copyright (c) 2011 The Snappy-Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the

distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.121 martian 3.3.3

1.121.1 Available under license :

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and

do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all

other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

1.122 github.com/aws/aws-sdk-go-v2/service/sts 1.38.2

1.122.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer

```
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
```

This member is required.
ClientToken *string

// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

```
 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
```

```
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
```

```
        with:
          path: new-ref
          fetch-depth: 0
      - name: Get Diff
        run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }} ${{ github.sha }} > refDiffFiles.txt
      - name: Get Target Files
        run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
      - name: Checkout scancode
        uses: actions/checkout@v2
        with:
          repository: nexB/scancode-toolkit
          path: scancode-toolkit
          fetch-depth: 1
      - name: Set up Python ${{ matrix.python-version }}
         uses: actions/setup-python@v2
        with:
          python-version: ${{ matrix.python-version }}
      # ScanCode
      - name: Self-configure scancode
        working-directory: ./scancode-toolkit
        run: ./scancode --help
      - name: Run Scan code on target
        run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
      - name: Run Scan code on pr ref
        run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
      # compare
      - name: License test
        run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
```

Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd

Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32
```

```
 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
```

```
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
              "target": "smithy.api#String"
           }
        },
        "traits": {
           "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
           "smithy.api#error": "client"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
           "DirectoryId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
              "traits": {
                 "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
              }
           },
           "ActiveDirectorySettings":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP \n\t\t\taddresses, and the credential provider for user administration.</p>"
              }
            },
            "ActiveDirectoryType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
              "traits": {
                "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
          "type": "structure",
          "members": {
            "DomainName": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
              }
            },
            "DomainIpv4List": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 2
                }
              }
            },
            "DomainCredentialsProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for \n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
               "code": 200,
               "method": "POST",
               "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
```

```
      "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
         }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

      {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
```

```
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
```

```
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}

    }
     },
     "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/DisassociateUser"
          },
          "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
```

```
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
    "type": "structure",
    "members": {
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },

    "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance user.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
```

```
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",
```

```
            "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
```

```
      "type": "String"
    }
  },
  "rules": [
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Endpoint"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseFIPS"
                },
                true
              ]
            }
          ],
          "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
          "type": "error"
        },
        {
          "conditions": [
            {

              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }
          ],
          "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
          "type": "error"
        },
        {
```

```
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                   "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

```
true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
```

```
                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
```

```
                "argv": [

            {
                    "ref": "PartitionResult"
                },
                "supportsFIPS"
            ]
        },
        true
    ]
  }
 ],
 "rules": [
  {
   "conditions": [],
   "endpoint": {

"url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                "properties": {},
                "headers": {}
            },
            "type": "endpoint"
        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "FIPS is enabled but this partition does not support FIPS",
        "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
```

```
                {

        "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]

        }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }

                ],
                    "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
```

```
                "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "error": "Invalid Configuration: Missing Region",
      "type": "error"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",

    "UseFIPS": true,
        "UseDualStack": false
      }
```

```
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
 true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                     "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }
                  },
```

```
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
```

```
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
                }
            },
            "LicenseServerEndpointId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
```

```
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
```

```
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
       "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
                }
            },
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>InstanceId</p>\n
</li>\n       </ul>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
         "type": "structure",
          "members": {
            "InstanceSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
 {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
```

```
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
         },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
```

```
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
"<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

         "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
```

```
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
```

```
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
     },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
       }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/identity-provider/RegisterIdentityProvider"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
    "type": "structure",
    "members": {
      "IdentityProvider": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
            }
        },

    "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
```

```
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
          "smithy.api#http":
```

```
{
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/identity-provider/UpdateIdentityProviderSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
      "type": "structure",
       "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the identity provider to
update. "
}
},
"UpdateSettings":
{
"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
"traits": {
"smithy.api#documentation": " Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the: \n
\n \n Subnets which you want to add to provision VPC endpoints. \n \n
\n Subnets which you want to remove the VPC endpoints from. \n \n
\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
```

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string
```

```
 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
```

```
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
 err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
```

```
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
```

```
 return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
```

```
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
```

```
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string
```

```
// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string
```

```
 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
```

```
//
the request.
//
// This member is required.
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string
```

```
// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
```

```
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
```

```
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
```

```
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
```

```
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
```

```
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
```

```
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
```

```
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
```

GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE

```
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata
```

```
 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
```

```
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:       region,
 ServiceID:
   ServiceID,
 OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
 spanInitializeStart
 InterceptExecution
 RegisterServiceMetadata
 legacyEndpointContextSetter
 SetLogger
 OperationInputValidation
 spanInitializeEnd
 Serialize stack step
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
 Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
 Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
 Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
```

CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
```

```
            "uri": "/subscription/DeregisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
               "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

       "traits": {
            "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
          }
        },
```

```
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
                }
            },
            "LastSuccessfulDataRetrievalTime": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
```

```
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

    "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
```

```
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
          }
        },
        "OsVersion": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
          }
        },
        "SubscriptionProviderCreateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
          }
        },
        "SubscriptionProviderUpdateTime": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
          }
        },
        "DualSubscription": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
          }
```

```
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
            "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
```

```
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
```

```
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }

    ],
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                    "type": "error"
                },
                {
                    "conditions": [],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "ref": "UseDualStack"
                                        },
                                        true
                                    ]

}
                            ],
                            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                            "type": "error"
                        },
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": {
                                    "ref": "Endpoint"
                                },
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
```

```
            "type": "tree"

        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "isSet",
                        "argv": [
                            {
                                "ref": "Region"
                            }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {

        "fn": "aws.partition",
                                "argv": [
                                    {
                                        "ref": "Region"
                                    }
                                ],
                                "assign": "PartitionResult"
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {

                                      "ref": "UseFIPS"
                                            },
                                            true
                                        ]
                                    },
                                    {
```

```
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }

  ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"

              },
                                "supportsFIPS"
                              ]
                            }
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [

                               {
                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                              ]
                            }
                          ]
                        }
                      ],
                      "rules": [
                        {
```

```
                "conditions": [],

        "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],

            "type": "tree"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {

        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [
                    {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
```

```
                "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
                  "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "FIPS is enabled
 but this partition does not support FIPS",
              "type": "error"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
```

```
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            {
                                                "ref": "UseDualStack"
                                            },
                                            true

                                ]
                                    }
                                ],
                                "rules": [
                                    {
                                        "conditions": [
                                            {
                                                "fn": "booleanEquals",
                                                "argv": [
                                                    true,
                                                    {
                                                        "fn": "getAttr",
                                                        "argv": [
                                                            {

                                                            "ref": "PartitionResult"
                                                            },
                                                            "supportsDualStack"
                                                        ]
                                                    }
                                                ]
                                            }
                                        ],
                                        "rules": [
                                            {
                                                "conditions": [],
                                                "rules": [

        {
                                                        "conditions": [],
                                                        "endpoint": {
                                                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                            "properties": {},
                                                            "headers": {}
                                                        },
                                                        "type": "endpoint"
                                                    }
                                                ],
                                                "type": "tree"
```

```
                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
],
"type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
```

```
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

 "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
        }
```

```
    },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
          }
        },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
          }
         },
        "params": {
          "Region": "cn-north-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
```

```
                {
                  "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                    }
                  },
                  "params": {
                    "Region": "cn-north-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }

                 },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
```

```
    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
                      }
                    },
                    "params": {
                      "Region": "us-isob-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
                    },
                    "params": {
                      "Region": "us-isob-east-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://example.com"
                      }
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },

          {
                    "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://example.com"
```

```
                }
              },
              "params": {
                "UseFIPS": false,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "Enabled",
                    "value": "Enabled",
                    "documentation": "Enabled LinuxSubscriptionsDiscovery"
                },
                {
                    "name": "Disabled",
                    "value": "Disabled",
                    "documentation": "Disabled LinuxSubscriptionsDiscovery"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
        "type": "structure",
        "members": {
            "SourceRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "OrganizationIntegration": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
                "traits": {
                    "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
```

```
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
 </p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
 <li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
 <code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
```

```
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
   <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
          <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListLinuxSubscriptions"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "Subscriptions"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
      "type": "structure",
      "members": {
        "Filters": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

        "traits": {
            "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
```

match a certain subscription's name. \n The valid names for this filter are: \n \n \n \n <code>Subscription</code>\n \n \n \n The valid Operators for this filter are: \n \n \n \n <code>contains</code>\n \n \n \n \n <code>equals</code>\n \n \n \n \n <code>Notequal</code>\n \n \n "
}
},
"MaxResults": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
"traits": {
"smithy.api#documentation": " The maximum items to return in a request. "
}
},
"NextToken": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response. ",
"smithy.api#length": {
"min": 1,
"max": 16384
}
}
}
},
"traits": {
"smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
"type": "structure",
"members": {
"Subscriptions": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
"traits": {
"smithy.api#documentation": " An array that contains subscription objects. "
}
},
"NextToken": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects. "

```
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",
```

```
    "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
```

```
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
         },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
```

```
                "value": "Enabled",
                "documentation": "Enabled OrganizationIntegration"
              },
              {

        "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
          "type": "list",
          "member": {
            "target": "smithy.api#String"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
          }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
            "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
            "smithy.api#required": {}
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat
Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
```

```
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
```

```
    "traits": {
      "smithy.api#enum": [
        {
          "name": "InProgress",
          "value": "InProgress",
          "documentation": "InProgress status"
        },
        {
          "name": "Completed",
          "value": "Completed",
          "documentation": "Completed status"
        },
        {
          "name": "Successful",
          "value": "Successful",
          "documentation": "Successful status"
        },
        {
          "name": "Failed",
          "value": "Failed",
          "documentation": "Failed status"
        }
      ]
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String",
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        }
      }
    },
    "traits": {
      "smithy.api#length": {
        "min": 1,
        "max": 100
      },
      "smithy.api#uniqueItems": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
    "type": "map",
    "key": {
      "target": "smithy.api#String"
```

```
        },
        "value": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the subscription.</p>"
            }
          },
          "Type": {
            "target": "smithy.api#String",
            "traits": {

       "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "RedHat",
            "value": "RedHat",
            "documentation": "RedHat subscription provider namespace"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
      "type":
"list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
```

```
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
```

```
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
```

```
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
              "method": "DELETE",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
          "type": "structure",

       "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
{}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
```

```
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
          }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
            }

      },
          "Status": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,

and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work,

excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions

of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.123 openssl 3.3.4-r0

1.123.1 Available under license :

This software is copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software; you can redistribute it and/or modify it under
the same terms as the Perl 5 programming language system itself.

Terms of the Perl programming language system itself

a) the GNU General Public License as published by the Free
Software Foundation; either version 1, or (at your option) any
later version, or
b) the "Artistic License"

--- The GNU General Public License, Version 1, February 1989 ---

This software is Copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software, licensed under:

The GNU General Public License, Version 1, February 1989

GNU GENERAL PUBLIC LICENSE
Version 1, February 1989

Copyright (C) 1989 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of a such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must tell them their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any program or other work which contains a notice placed by the copyright holder saying it may be

distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this General Public License and to the absence of any warranty; and give any other recipients of the
Program a copy of this General Public License
along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

a) cause the modified files to carry prominent notices stating that you changed the files and the date of any change; and

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive
use
in the simplest and most usual way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this General Public License.

d) You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 1 and 2 above provided that you also do one of the following:

a) accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

4. You may not copy, modify, sublicense, distribute or transfer the Program except as expressly provided under this General Public License. Any attempt otherwise to copy, modify, sublicense, distribute or transfer the Program is void, and will automatically terminate your rights to use the Program under this License. However, parties who have received copies, or rights to use copies, from you under this General Public License will not have their licenses terminated so long as such parties remain in full compliance.

5. By copying, distributing or modifying the Program (or any work based on the Program) you indicate your acceptance of this license to do so, and all its terms and conditions.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein.

7. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of the license which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the license, you may choose any version ever published by the Free Software Foundation.

8. If you wish to incorporate parts of the Program into other free programs whose distribution
conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

9. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

10. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to humanity, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so,
attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) 19yy <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free
Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) 19xx name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here a sample; alter
 the names:

 Yoyodyne, Inc., hereby disclaims all copyright interest in the
 program `Gnomovision' (a program to direct compilers to make passes
 at assemblers) written by James Hacker.

 <signature of Ty Coon>, 1 April 1989
 Ty Coon, President of Vice

That's all there is to it!

--- The Artistic License 1.0 ---

This software is Copyright (c) 2013 by Mark Jason Dominus <mjd@cpan.org>.

This is free software, licensed under:

 The Artistic License 1.0

The Artistic License

Preamble

The intent of this document is to state the conditions under which a Package
may be copied, such that the Copyright Holder maintains some semblance of
artistic control over the development of the package, while giving the users of
the package the right to use and distribute the Package in a more-or-less
customary fashion, plus the right to make reasonable modifications.

Definitions:

 - "Package" refers to the collection of files distributed by the Copyright
   Holder, and derivatives of that collection
 of files created through
   textual modification.
 - "Standard Version" refers to such a Package if it has not been modified,
   or has been modified in accordance with the wishes of the Copyright
   Holder.
 - "Copyright Holder" is whoever is named in the copyright or copyrights for
   the package.
 - "You" is you, if you're thinking about copying or distributing this Package.
 - "Reasonable copying fee" is whatever you can justify on the basis of media
   cost, duplication charges, time of people involved, and so on. (You will
   not be required to justify it to the Copyright Holder, but only to the

computing community at large as a market that must bear the fee.)
- "Freely Available" means that no fee is charged for the item itself, though there may be fees involved in handling the item. It also means that recipients of the item may redistribute it under the same conditions they received it.

1. You may make and give away verbatim copies of
the source form of the
Standard Version of this Package without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers.

2. You may apply bug fixes, portability fixes and other modifications derived from the Public Domain or from the Copyright Holder. A Package modified in such a way shall still be considered the Standard Version.

3. You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed that file, and provided that you do at least ONE of the following:

a) place your modifications in the Public Domain or otherwise make them Freely Available, such as by posting said modifications to Usenet or an equivalent medium, or placing the modifications on a major archive site such as ftp.uu.net, or by allowing the Copyright Holder to include your modifications in the Standard Version of the Package.

b) use the modified
Package only within your corporation or organization.

c) rename any non-standard executables so the names do not conflict with standard executables, which must also be provided, and provide a separate manual page for each non-standard executable that clearly documents how it differs from the Standard Version.

d) make other distribution arrangements with the Copyright Holder.

4. You may distribute the programs of this Package in object code or executable form, provided that you do at least ONE of the following:

a) distribute a Standard Version of the executables and library files, together with instructions (in the manual page or equivalent) on where to get the Standard Version.

b) accompany the distribution with the machine-readable source of the Package with your modifications.

c) accompany any non-standard executables with their corresponding Standard Version executables, giving the non-standard executables non-standard names,

and clearly documenting the differences in manual pages (or
equivalent), together with instructions on where to get the Standard
Version.

d) make other distribution arrangements with the Copyright Holder.

5. You may charge a reasonable copying fee for any distribution of this Package. You may charge any fee you choose for support of this Package. You may not charge a fee for this Package itself. However, you may distribute this Package in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution provided that you do not advertise this Package as a product of your own.

6. The scripts and library files supplied as input to or produced as output from the programs of this Package do not automatically fall under the copyright of this Package, but belong to whomever generated them, and may be sold commercially, and may be aggregated with this Package.

7. C or perl subroutines supplied by you and linked into this Package
shall not
be considered part of this Package.

8. The name of the Copyright Holder may not be used to endorse or promote products derived from this software without specific prior written permission.

9. THIS PACKAGE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTIBILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

Apache License
Version 2.0, January 2004
https://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition,

"control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and

subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding

those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise,

unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

1.124 alpine-release 3.21.4-r0

1.124.1 Available under license :

```
# Contributor: Carlo Landmeter <clandmeter@alpinelinux.org>
# Maintainer: Kevin Daudt <kdaudt@alpinelinux.org>
pkgname=spdx-licenses
pkgver=3.27.0
pkgrel=0
pkgdesc="Various data formats for the SPDX License List"
url="https://spdx.org/"
arch="noarch"
options="!check" # no test suite
license="CC-BY-3.0"
source="license-list-data-$pkgver.tar.gz::https://github.com/spdx/license-list-data/archive/v$pkgver.tar.gz"
builddir="$srcdir/license-list-data-$pkgver"
subpackages="$pkgname-list"

_types="html json rdfa rdfnt rdfturtle rdfxml template text"

for type in $_types; do
 subpackages="$subpackages $pkgname-$type:_subpkg"
done
```

```
package() {
 mkdir -p "$pkgdir"
}

_subpkg() {
 local type=${subpkgname/$pkgname-/}
 pkgdesc="$pkgdesc ($type)"
 install_if="$pkgname=$pkgver-r$pkgrel"
 mkdir -p "$subpkgdir"/usr/share/spdx
 cp -r "$builddir"/$type "$subpkgdir"/usr/share/spdx/
}

list() {
 pkgdesc="$pkgdesc (licence list)"
 mkdir -p "$subpkgdir"/usr/share/spdx
 local i; for i in "$builddir"/text/*.txt;
 do
  local license=${i##*/}
  echo ${license%.*} >> "$subpkgdir"/usr/share/spdx/license.lst
 done
}

sha512sums="
16d59c81e331b54b52639826f83408d98144cdaa70eacc3e8ce35dc3b13992e4794cf7515eb9db200efd390a0c0e35ae9
d4706fbe0ca6a8d236189e88870720c  license-list-data-3.27.0.tar.gz
"
```


MIT License

Copyright 2019-2021 Caleb Porzio and contributors

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT
 OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.

```
# Contributor: Maxim Karasev <begs@disroot.org>
# Maintainer: mio <miyopan@e.email>
pkgname=bsd-games
pkgver=3.3
pkgrel=2
pkgdesc="traditional text mode games from BSD"
url="https://bsd-games.sourceforge.io/"
arch="all"
license="BSD-3-Clause"
install="$pkgname.post-install"
makedepends="ncurses-dev coreutils" # configure causes busybox expr error
subpackages="$pkgname-doc"
source="https://sourceforge.net/projects/bsd-games/files/bsd-games-$pkgver.tar.gz
 0001-bsd-games-scores-dir.patch
 "
options="!check" # no tests

build() {
 # some GNU autoconf options are ignored, but it works
 ./configure \
  --build=$CBUILD \
  --host=$CHOST \
  --prefix=/usr \
  --sysconfdir=/etc \
  --mandir=/usr/share/man \
  --scoredir=/usr/share/$pkgname
 make
}

package() {
 make DESTDIR="$pkgdir" install
 install -Dm644 LICENSE "$pkgdir"/usr/share/licenses/bsd-games/LICENSE
}

sha512sums="
aaf36d09d4fe68514a5c279063d7e77a9a9a84c447037cba974b29faa07eb80c2aab2379d0699c196b5c27ffe1b2bb2c6
8d3390143e0e62d5e3d210ccfb61294
  bsd-games-3.3.tar.gz
e1def0d4835a877242c4173fae862e278a7858738e0bacacbb045a42bcabec2aa7c72d000bbd2421ce35fe66cdc1f52c0
577b7e278029ca5ed50f7aab22319f6  0001-bsd-games-scores-dir.patch
"
```

MIT License

Copyright (c) 2023 Leaf Corcoran

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights

to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION
 WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
Maintainer: Natanael Copa <ncopa@alpinelinux.org>
pkgname=libart-lgpl
pkgver=2.3.21
pkgrel=8
pkgdesc="A library for high-performance 2D graphics"
url="https://www.levien.com/libart/"
arch="all"
options="!check" # No test suite.
license="LGPL-2.0-or-later"
subpackages="$pkgname-dev"
source="https://download.gnome.org/sources/libart_lgpl/2.3/libart_lgpl-$pkgver.tar.bz2
 "

builddir="$srcdir"/libart_lgpl-$pkgver

prepare() {
 update_config_sub
 default_prepare
}

build() {
 ./configure \
  --build=$CBUILD \
  --host=$CHOST \
  --prefix=/usr
 make
}

package() {
 make DESTDIR="$pkgdir" install
}

sha512sums="8a632a6a4da59e5e8c02ec2f5a57e36d182b325b46513765425e5f171ff9ae326af1b133725beba28f7e7

6654309e001aee9bace727b5b4c8589405256a3c020 libart_lgpl-2.3.21.tar.bz2"
mini_sendmail - accept email on behalf of real sendmail

Copyright 1999,2015 by Jef Poskanzer <jef@mail.acme.com>.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING,
 BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.
Contributor: Patrycja Rosa <alpine@ptrcnull.me>
Maintainer: Patrycja Rosa <alpine@ptrcnull.me>
pkgname=bsd-compat-headers
pkgver=0.7.2
pkgrel=6
pkgdesc="BSD compatibility headers (cdefs, queue, tree)"
url="https://gitlab.alpinelinux.org/alpine/aports"
arch="noarch"
license="BSD-2-Clause AND BSD-3-Clause"
source="
 cdefs.h
 queue.h
 tree.h
"
builddir="$srcdir"
options="!check" # just headers

package() {
 mkdir -p "$pkgdir"
 install -Dm644 -t "$pkgdir"/usr/include/sys \
  cdefs.h queue.h tree.h

}
sha512sums="
37c8fc73c7aea7b490f7850927e2bb91d12137c9e59e22c084146d515696dbc7973b5de92f4c987ba080dd2502ba83127006442c3f019b6447a620c0cae73178 cdefs.h
2f0d5e6e4dc3350285cf17009265dddcbe12431c111868eea39bc8cb038ab7c1f2acacbb21735c4e9d4a1fd106a8fc0f8611ea33987d4faba37dde5ce6da0750 queue.h
d9ac210d81feb8ad2655bc80fb065d3fe20ae4417b32b4a1711e6738a4870140005c13373b5d1846ef3ce5ae6da45f2dacef2092881eded0a2e94f6a07752ef3 tree.h
"
Original Copyright (c) 1985 by Supoj Sutanthavibul
Parts Copyright (c) 1989-2012 by Brian V. Smith
Parts Copyright (c) 1991 by Paul King
Other Copyrights may be found in various files

Main Xfig copyright notice:

Any party obtaining a copy of these files is granted, free of charge, a full and unrestricted irrevocable, world-wide, paid up, royalty-free, nonexclusive right and license to deal in this software and documentation files (the "Software"), including without limitation the rights to use, copy, modify, merge, publish and/or distribute copies of the Software, and to permit persons who receive copies from any such party to do so, with the only requirement being that this copyright notice remain intact.

No representations are made about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

Parts Copyright (C) 1993 by Alan Richardson (mppa3@uk.ac.sussex.syma)
The text rotation code in w_rottext.c was written by Alan Richardson.
 The above copyright notice holds for this work as well.

Parts Copyright (c) 1994 by Anthony Dekker
The Kohonen neural network code for color optimization was written by Anthony Dekker.

Parts Copyright (c) 1995 by C. Blanc and C. Schlick
The X-Spline code was written Carole Blanc (blanc@labri.u-bordeaux.fr) and Christophe Schlick (schlick@labri.u-bordeaux.fr) starting from an initial implementation done by C. Feuille, S. Grosbois, L. Maziere and L. Minihot as a student practice (Universite Bordeaux, France). For additional information about X-splines, see:
"X-Splines: A Spline Model Designed for the End User" by C. Blanc and C. Schlick, Proceedings of SIGGRAPH'95
http://dept-info.labri.u-bordeaux.fr/~schlick/DOC/sig1.html
/* $NetBSD: queue.h,v 1.70 2015/11/02 15:21:23 christos Exp $ */

/*
* Copyright (c) 1991, 1993
* The Regents of the University of California. All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the above copyright

```
*    notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*    notice, this list of conditions and the following disclaimer in the
*    documentation and/or other materials provided with the distribution.
* 3. Neither the name of the University nor the names of its contributors
*    may be used to endorse or promote products derived from this software
*    without specific prior written permission.
*
* THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING,
 BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
* SUCH DAMAGE.
*
* @(#)queue.h 8.5 (Berkeley) 8/20/94
*/

#ifndef _SYS_QUEUE_H_
#define _SYS_QUEUE_H_

/*
* This file defines five types of data structures: singly-linked lists,
* lists, simple queues, tail queues, and circular queues.
*
* A singly-linked list is headed by a single forward pointer. The
* elements are singly linked for minimum space and
 pointer manipulation
* overhead at the expense of O(n) removal for arbitrary elements. New
* elements can be added to the list after an existing element or at the
* head of the list.  Elements being removed from the head of the list
* should use the explicit macro for this purpose for optimum
* efficiency. A singly-linked list may only be traversed in the forward
* direction.  Singly-linked lists are ideal for applications with large
* datasets and few or no removals or for implementing a LIFO queue.
*
* A list is headed by a single forward pointer (or an array of forward
* pointers for a hash table header). The elements are doubly linked
* so that an arbitrary element can be removed without a need to
* traverse the list. New elements can be added to the list before
* or after an existing element or at the head of the list. A list
* may only be traversed in the forward direction.
```

```
*
* A simple queue is headed by a pair of pointers, one the head of the
* list and the
 other to the tail of the list. The elements are singly
* linked to save space, so elements can only be removed from the
* head of the list. New elements can be added to the list after
* an existing element, at the head of the list, or at the end of the
* list. A simple queue may only be traversed in the forward direction.
*
* A tail queue is headed by a pair of pointers, one to the head of the
* list and the other to the tail of the list. The elements are doubly
* linked so that an arbitrary element can be removed without a need to
* traverse the list. New elements can be added to the list before or
* after an existing element, at the head of the list, or at the end of
* the list. A tail queue may be traversed in either direction.
*
* A circle queue is headed by a pair of pointers, one to the head of the
* list and the other to the tail of the list. The elements are doubly
* linked so that an arbitrary element can be removed without a need to
* traverse the list. New elements
 can be added to the list before or after
* an existing element, at the head of the list, or at the end of the list.
* A circle queue may be traversed in either direction, but has a more
* complex end of list detection.
*
* For details on the use of these macros, see the queue(3) manual page.
*/

/*
* Include the definition of NULL only on NetBSD because sys/null.h
* is not available elsewhere.  This conditional makes the header
* portable and it can simply be dropped verbatim into any system.
* The caveat is that on other systems some other header
* must provide NULL before the macros can be used.
*/
#ifdef __NetBSD__
#include <sys/null.h>
#endif

#if defined(QUEUEDEBUG)
# if defined(_KERNEL)
#  define QUEUEDEBUG_ABORT(...) panic(__VA_ARGS__)
# else
#  include <err.h>
#  define QUEUEDEBUG_ABORT(...) err(1, __VA_ARGS__)
# endif
#endif
```

```
/*
* Singly-linked List definitions.
*/
#define SLIST_HEAD(name, type)      \
struct name {       \
 struct type *slh_first; /* first
 element */   \
}

#define SLIST_HEAD_INITIALIZER(head)     \
 { NULL }

#define SLIST_ENTRY(type)      \
struct {       \
 struct type *sle_next; /* next element */   \
}

/*
* Singly-linked List access methods.
*/
#define SLIST_FIRST(head) ((head)->slh_first)
#define SLIST_END(head)  NULL
#define SLIST_EMPTY(head) ((head)->slh_first == NULL)
#define SLIST_NEXT(elm, field) ((elm)->field.sle_next)

#define SLIST_FOREACH(var, head, field)     \
 for((var) = (head)->slh_first;     \
    (var) != SLIST_END(head);     \
    (var) = (var)->field.sle_next)

#define SLIST_FOREACH_SAFE(var, head, field, tvar)   \
 for ((var) = SLIST_FIRST((head));    \
    (var) != SLIST_END(head) &&     \
    ((tvar) = SLIST_NEXT((var), field), 1);   \
    (var) = (tvar))

/*
* Singly-linked List functions.
*/
#define SLIST_INIT(head) do {      \
 (head)->slh_first = SLIST_END(head);    \
} while (/*CONSTCOND*/0)

#define SLIST_INSERT_AFTER(slistelm, elm, field) do {   \
 (elm)->field.sle_next = (slistelm)->field.sle_next;  \
 (slistelm)->field.sle_next
 = (elm);    \
} while (/*CONSTCOND*/0)
```

```
#define SLIST_INSERT_HEAD(head, elm, field) do {   \
 (elm)->field.sle_next = (head)->slh_first;   \
 (head)->slh_first = (elm);     \
} while (/*CONSTCOND*/0)

#define SLIST_REMOVE_AFTER(slistelm, field) do {   \
 (slistelm)->field.sle_next =     \
    SLIST_NEXT(SLIST_NEXT((slistelm), field), field);  \
} while (/*CONSTCOND*/0)

#define SLIST_REMOVE_HEAD(head, field) do {    \
 (head)->slh_first = (head)->slh_first->field.sle_next;  \
} while (/*CONSTCOND*/0)

#define SLIST_REMOVE(head, elm, type, field) do {   \
 if ((head)->slh_first == (elm)) {    \
  SLIST_REMOVE_HEAD((head), field);   \
 }       \
 else {       \
  struct type *curelm = (head)->slh_first;  \
  while(curelm->field.sle_next != (elm))   \
   curelm = curelm->field.sle_next;  \
  curelm->field.sle_next =    \
     curelm->field.sle_next->field.sle_next;  \
 }       \
} while (/*CONSTCOND*/0)


/*
* List definitions.
 */
#define LIST_HEAD(name, type)      \
struct name {       \
 struct type *lh_first; /* first element */   \
}

#define LIST_HEAD_INITIALIZER(head)     \
 { NULL }

#define LIST_ENTRY(type)      \
struct {       \
 struct type *le_next; /* next element */   \
 struct type **le_prev; /* address of previous next element */ \
}

/*
* List access methods.
```

```
*/
#define LIST_FIRST(head)  ((head)->lh_first)
#define LIST_END(head)   NULL
#define LIST_EMPTY(head)  ((head)->lh_first == LIST_END(head))
#define LIST_NEXT(elm, field)  ((elm)->field.le_next)

#define LIST_FOREACH(var, head, field)     \
 for ((var) = ((head)->lh_first);    \
    (var) != LIST_END(head);     \
    (var) = ((var)->field.le_next))

#define LIST_FOREACH_SAFE(var, head, field, tvar)   \
 for ((var) = LIST_FIRST((head));    \
    (var) != LIST_END(head) &&     \
    ((tvar) = LIST_NEXT((var), field), 1);   \
    (var) = (tvar))

#define LIST_MOVE(head1, head2) do {     \
 LIST_INIT((head2));      \
 if (!LIST_EMPTY((head1)))
 {     \
  (head2)->lh_first = (head1)->lh_first;   \
  LIST_INIT((head1));     \
 }        \
} while (/*CONSTCOND*/0)

/*
* List functions.
*/
#if defined(QUEUEDEBUG)
#define QUEUEDEBUG_LIST_INSERT_HEAD(head, elm, field)   \
 if ((head)->lh_first &&      \
    (head)->lh_first->field.le_prev != &(head)->lh_first) \
  QUEUEDEBUG_ABORT("LIST_INSERT_HEAD %p %s:%d", (head), \
      __FILE__, __LINE__);
#define QUEUEDEBUG_LIST_OP(elm, field)     \
 if ((elm)->field.le_next &&     \
    (elm)->field.le_next->field.le_prev !=   \
    &(elm)->field.le_next)     \
  QUEUEDEBUG_ABORT("LIST_* forw %p %s:%d", (elm),  \
      __FILE__, __LINE__);    \
 if (*(elm)->field.le_prev != (elm))    \
  QUEUEDEBUG_ABORT("LIST_* back %p %s:%d", (elm),  \
      __FILE__, __LINE__);
#define QUEUEDEBUG_LIST_POSTREMOVE(elm, field)    \
 (elm)->field.le_next = (void *)1L;    \
 (elm)->field.le_prev = (void *)1L;
#else
```

```
#define QUEUEDEBUG_LIST_INSERT_HEAD(head, elm, field)
#define QUEUEDEBUG_LIST_OP(elm,
 field)
#define QUEUEDEBUG_LIST_POSTREMOVE(elm, field)
#endif

#define LIST_INIT(head) do {      \
 (head)->lh_first = LIST_END(head);    \
} while (/*CONSTCOND*/0)

#define LIST_INSERT_AFTER(listelm, elm, field) do {   \
 QUEUEDEBUG_LIST_OP((listelm), field)    \
 if (((elm)->field.le_next = (listelm)->field.le_next) !=  \
    LIST_END(head))      \
  (listelm)->field.le_next->field.le_prev =  \
     &(elm)->field.le_next;    \
 (listelm)->field.le_next = (elm);    \
 (elm)->field.le_prev = &(listelm)->field.le_next;  \
} while (/*CONSTCOND*/0)

#define LIST_INSERT_BEFORE(listelm, elm, field) do {   \
 QUEUEDEBUG_LIST_OP((listelm), field)    \
 (elm)->field.le_prev = (listelm)->field.le_prev;  \
 (elm)->field.le_next = (listelm);    \
 *(listelm)->field.le_prev = (elm);    \
 (listelm)->field.le_prev = &(elm)->field.le_next;  \
} while (/*CONSTCOND*/0)

#define LIST_INSERT_HEAD(head, elm, field) do {    \
 QUEUEDEBUG_LIST_INSERT_HEAD((head), (elm), field)  \
 if (((elm)->field.le_next
 = (head)->lh_first) != LIST_END(head))\
  (head)->lh_first->field.le_prev = &(elm)->field.le_next;\
 (head)->lh_first = (elm);     \
 (elm)->field.le_prev = &(head)->lh_first;   \
} while (/*CONSTCOND*/0)

#define LIST_REMOVE(elm, field) do {     \
 QUEUEDEBUG_LIST_OP((elm), field)    \
 if ((elm)->field.le_next != NULL)    \
  (elm)->field.le_next->field.le_prev =    \
     (elm)->field.le_prev;    \
 *(elm)->field.le_prev = (elm)->field.le_next;   \
 QUEUEDEBUG_LIST_POSTREMOVE((elm), field)   \
} while (/*CONSTCOND*/0)

#define LIST_REPLACE(elm, elm2, field) do {    \
 if (((elm2)->field.le_next = (elm)->field.le_next) != NULL) \
```

```
 (elm2)->field.le_next->field.le_prev =   \
     &(elm2)->field.le_next;    \
 (elm2)->field.le_prev = (elm)->field.le_prev;   \
 *(elm2)->field.le_prev = (elm2);    \
 QUEUEDEBUG_LIST_POSTREMOVE((elm), field)   \
} while (/*CONSTCOND*/0)

/*
* Simple queue definitions.
*/
#define SIMPLEQ_HEAD(name, type)     \
struct name {        \
 struct
 type *sqh_first; /* first element */   \
 struct type **sqh_last; /* addr of last next element */  \
}

#define SIMPLEQ_HEAD_INITIALIZER(head)     \
 { NULL, &(head).sqh_first }

#define SIMPLEQ_ENTRY(type)      \
struct {        \
 struct type *sqe_next; /* next element */   \
}

/*
* Simple queue access methods.
*/
#define SIMPLEQ_FIRST(head)  ((head)->sqh_first)
#define SIMPLEQ_END(head)  NULL
#define SIMPLEQ_EMPTY(head)  ((head)->sqh_first == SIMPLEQ_END(head))
#define SIMPLEQ_NEXT(elm, field) ((elm)->field.sqe_next)

#define SIMPLEQ_FOREACH(var, head, field)    \
 for ((var) = ((head)->sqh_first);    \
     (var) != SIMPLEQ_END(head);     \
     (var) = ((var)->field.sqe_next))

#define SIMPLEQ_FOREACH_SAFE(var, head, field, next)   \
 for ((var) = ((head)->sqh_first);    \
     (var) != SIMPLEQ_END(head) &&    \
     ((next = ((var)->field.sqe_next)), 1);   \
     (var) = (next))

/*
* Simple queue functions.
*/
#define SIMPLEQ_INIT(head) do {      \
```

```
 (head)->sqh_first = NULL;     \
 (head)->sqh_last
 = &(head)->sqh_first;    \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_INSERT_HEAD(head, elm, field) do {   \
 if (((elm)->field.sqe_next = (head)->sqh_first) == NULL) \
  (head)->sqh_last = &(elm)->field.sqe_next;  \
 (head)->sqh_first = (elm);     \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_INSERT_TAIL(head, elm, field) do {   \
 (elm)->field.sqe_next = NULL;     \
 *(head)->sqh_last = (elm);     \
 (head)->sqh_last = &(elm)->field.sqe_next;   \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_INSERT_AFTER(head, listelm, elm, field) do {  \
 if (((elm)->field.sqe_next = (listelm)->field.sqe_next) == NULL)\
  (head)->sqh_last = &(elm)->field.sqe_next;  \
 (listelm)->field.sqe_next = (elm);    \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_REMOVE_HEAD(head, field) do {    \
 if (((head)->sqh_first = (head)->sqh_first->field.sqe_next) == NULL) \
  (head)->sqh_last = &(head)->sqh_first;   \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_REMOVE_AFTER(head, elm, field) do {   \
 if
 (((elm)->field.sqe_next = (elm)->field.sqe_next->field.sqe_next) \
    == NULL)       \
  (head)->sqh_last = &(elm)->field.sqe_next;  \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_REMOVE(head, elm, type, field) do {   \
 if ((head)->sqh_first == (elm)) {    \
  SIMPLEQ_REMOVE_HEAD((head), field);   \
 } else {       \
  struct type *curelm = (head)->sqh_first;  \
  while (curelm->field.sqe_next != (elm))   \
   curelm = curelm->field.sqe_next;  \
  if ((curelm->field.sqe_next =    \
   curelm->field.sqe_next->field.sqe_next) == NULL) \
      (head)->sqh_last = &(curelm)->field.sqe_next; \
 }       \
} while (/*CONSTCOND*/0)
```

```
#define SIMPLEQ_CONCAT(head1, head2) do {    \
 if (!SIMPLEQ_EMPTY((head2))) {     \
  *(head1)->sqh_last = (head2)->sqh_first;  \
  (head1)->sqh_last = (head2)->sqh_last;  \
  SIMPLEQ_INIT((head2));     \
 }       \
} while (/*CONSTCOND*/0)

#define SIMPLEQ_LAST(head, type, field)     \
 (SIMPLEQ_EMPTY((head)) ?      \
  NULL :      \
       ((struct type
 *)(void *)    \
  ((char *)((head)->sqh_last) - offsetof(struct type, field))))

/*
* Tail queue definitions.
*/
#define _TAILQ_HEAD(name, type, qual)     \
struct name {       \
 qual type *tqh_first;  /* first element */  \
 qual type *qual *tqh_last; /* addr of last next element */ \
}
#define TAILQ_HEAD(name, type) _TAILQ_HEAD(name, struct type,)

#define TAILQ_HEAD_INITIALIZER(head)     \
 { TAILQ_END(head), &(head).tqh_first }

#define _TAILQ_ENTRY(type, qual)     \
struct {       \
 qual type *tqe_next;  /* next element */  \
 qual type *qual *tqe_prev; /* address of previous next element */\
}
#define TAILQ_ENTRY(type) _TAILQ_ENTRY(struct type,)

/*
* Tail queue access methods.
*/
#define TAILQ_FIRST(head)  ((head)->tqh_first)
#define TAILQ_END(head)   (NULL)
#define TAILQ_NEXT(elm, field)  ((elm)->field.tqe_next)
#define TAILQ_LAST(head, headname) \
 (*(((struct headname *)(void *)((head)->tqh_last))->tqh_last))
#define TAILQ_PREV(elm, headname, field) \
 (*(((struct headname
 *)(void *)((elm)->field.tqe_prev))->tqh_last))
#define TAILQ_EMPTY(head)  (TAILQ_FIRST(head) == TAILQ_END(head))
```

```
#define TAILQ_FOREACH(var, head, field)     \
 for ((var) = ((head)->tqh_first);    \
     (var) != TAILQ_END(head);     \
     (var) = ((var)->field.tqe_next))

#define TAILQ_FOREACH_SAFE(var, head, field, next)   \
 for ((var) = ((head)->tqh_first);    \
     (var) != TAILQ_END(head) &&     \
     ((next) = TAILQ_NEXT(var, field), 1); (var) = (next))

#define TAILQ_FOREACH_REVERSE(var, head, headname, field)  \
 for ((var) = TAILQ_LAST((head), headname);   \
     (var) != TAILQ_END(head);     \
     (var) = TAILQ_PREV((var), headname, field))

#define TAILQ_FOREACH_REVERSE_SAFE(var, head, headname, field, prev) \
 for ((var) = TAILQ_LAST((head), headname);   \
     (var) != TAILQ_END(head) &&     \
     ((prev) = TAILQ_PREV((var), headname, field), 1); (var) = (prev))

/*
* Tail queue functions.
*/
#if defined(QUEUEDEBUG)
#define QUEUEDEBUG_TAILQ_INSERT_HEAD(head,
 elm, field)   \
 if ((head)->tqh_first &&     \
     (head)->tqh_first->field.tqe_prev != &(head)->tqh_first) \
  QUEUEDEBUG_ABORT("TAILQ_INSERT_HEAD %p %s:%d", (head), \
      __FILE__, __LINE__);
#define QUEUEDEBUG_TAILQ_INSERT_TAIL(head, elm, field)   \
 if (*(head)->tqh_last != NULL)     \
  QUEUEDEBUG_ABORT("TAILQ_INSERT_TAIL %p %s:%d", (head), \
      __FILE__, __LINE__);
#define QUEUEDEBUG_TAILQ_OP(elm, field)     \
 if ((elm)->field.tqe_next &&     \
     (elm)->field.tqe_next->field.tqe_prev !=   \
     &(elm)->field.tqe_next)     \
  QUEUEDEBUG_ABORT("TAILQ_* forw %p %s:%d", (elm), \
      __FILE__, __LINE__);    \
 if (*(elm)->field.tqe_prev != (elm))    \
  QUEUEDEBUG_ABORT("TAILQ_* back %p %s:%d", (elm), \
      __FILE__, __LINE__);
#define QUEUEDEBUG_TAILQ_PREREMOVE(head, elm, field)   \
 if ((elm)->field.tqe_next == NULL &&    \
     (head)->tqh_last != &(elm)->field.tqe_next)   \
  QUEUEDEBUG_ABORT("TAILQ_PREREMOVE head %p elm %p %s:%d",\
```

```
    (head), (elm), __FILE__,
 __LINE__);
#define QUEUEDEBUG_TAILQ_POSTREMOVE(elm, field)    \
 (elm)->field.tqe_next = (void *)1L;    \
 (elm)->field.tqe_prev = (void *)1L;
#else
#define QUEUEDEBUG_TAILQ_INSERT_HEAD(head, elm, field)
#define QUEUEDEBUG_TAILQ_INSERT_TAIL(head, elm, field)
#define QUEUEDEBUG_TAILQ_OP(elm, field)
#define QUEUEDEBUG_TAILQ_PREREMOVE(head, elm, field)
#define QUEUEDEBUG_TAILQ_POSTREMOVE(elm, field)
#endif

#define TAILQ_INIT(head) do {      \
 (head)->tqh_first = TAILQ_END(head);    \
 (head)->tqh_last = &(head)->tqh_first;    \
} while (/*CONSTCOND*/0)

#define TAILQ_INSERT_HEAD(head, elm, field) do {   \
 QUEUEDEBUG_TAILQ_INSERT_HEAD((head), (elm), field)  \
 if (((elm)->field.tqe_next = (head)->tqh_first) != TAILQ_END(head))\
  (head)->tqh_first->field.tqe_prev =   \
     &(elm)->field.tqe_next;    \
 else       \
  (head)->tqh_last = &(elm)->field.tqe_next;  \
 (head)->tqh_first = (elm);     \
 (elm)->field.tqe_prev = &(head)->tqh_first;   \
} while (/*CONSTCOND*/0)

#define TAILQ_INSERT_TAIL(head,
 elm, field) do {   \
 QUEUEDEBUG_TAILQ_INSERT_TAIL((head), (elm), field)  \
 (elm)->field.tqe_next = TAILQ_END(head);   \
 (elm)->field.tqe_prev = (head)->tqh_last;   \
 *(head)->tqh_last = (elm);     \
 (head)->tqh_last = &(elm)->field.tqe_next;   \
} while (/*CONSTCOND*/0)

#define TAILQ_INSERT_AFTER(head, listelm, elm, field) do {  \
 QUEUEDEBUG_TAILQ_OP((listelm), field)    \
 if (((elm)->field.tqe_next = (listelm)->field.tqe_next) !=  \
    TAILQ_END(head))      \
  (elm)->field.tqe_next->field.tqe_prev =   \
     &(elm)->field.tqe_next;    \
 else       \
  (head)->tqh_last = &(elm)->field.tqe_next;  \
 (listelm)->field.tqe_next = (elm);    \
 (elm)->field.tqe_prev = &(listelm)->field.tqe_next;  \
```

```
} while (/*CONSTCOND*/0)

#define TAILQ_INSERT_BEFORE(listelm, elm, field) do {   \
 QUEUEDEBUG_TAILQ_OP((listelm), field)    \
 (elm)->field.tqe_prev = (listelm)->field.tqe_prev;  \
 (elm)->field.tqe_next = (listelm);    \
 *(listelm)->field.tqe_prev = (elm);    \
 (listelm)->field.tqe_prev
 = &(elm)->field.tqe_next;  \
} while (/*CONSTCOND*/0)

#define TAILQ_REMOVE(head, elm, field) do {    \
 QUEUEDEBUG_TAILQ_PREREMOVE((head), (elm), field)  \
 QUEUEDEBUG_TAILQ_OP((elm), field)    \
 if (((elm)->field.tqe_next) != TAILQ_END(head))   \
  (elm)->field.tqe_next->field.tqe_prev =   \
     (elm)->field.tqe_prev;    \
 else       \
  (head)->tqh_last = (elm)->field.tqe_prev;  \
 *(elm)->field.tqe_prev = (elm)->field.tqe_next;   \
 QUEUEDEBUG_TAILQ_POSTREMOVE((elm), field);   \
} while (/*CONSTCOND*/0)

#define TAILQ_REPLACE(head, elm, elm2, field) do {   \
      if (((elm2)->field.tqe_next = (elm)->field.tqe_next) !=  \
    TAILQ_END(head))        \
            (elm2)->field.tqe_next->field.tqe_prev =  \
               &(elm2)->field.tqe_next;    \
      else       \
            (head)->tqh_last = &(elm2)->field.tqe_next;  \
      (elm2)->field.tqe_prev = (elm)->field.tqe_prev;   \
      *(elm2)->field.tqe_prev = (elm2);    \
 QUEUEDEBUG_TAILQ_POSTREMOVE((elm),
 field);   \
} while (/*CONSTCOND*/0)

#define TAILQ_CONCAT(head1, head2, field) do {    \
 if (!TAILQ_EMPTY(head2)) {     \
  *(head1)->tqh_last = (head2)->tqh_first;  \
  (head2)->tqh_first->field.tqe_prev = (head1)->tqh_last; \
  (head1)->tqh_last = (head2)->tqh_last;   \
  TAILQ_INIT((head2));     \
 }       \
} while (/*CONSTCOND*/0)

/*
* Singly-linked Tail queue declarations.
*/
```

```
#define STAILQ_HEAD(name, type)      \
struct name {        \
 struct type *stqh_first; /* first element */  \
 struct type **stqh_last; /* addr of last next element */ \
}

#define STAILQ_HEAD_INITIALIZER(head)     \
 { NULL, &(head).stqh_first }

#define STAILQ_ENTRY(type)      \
struct {        \
 struct type *stqe_next; /* next element */   \
}

/*
* Singly-linked Tail queue access methods.
*/
#define STAILQ_FIRST(head) ((head)->stqh_first)
#define STAILQ_END(head) NULL
#define STAILQ_NEXT(elm, field) ((elm)->field.stqe_next)
#define STAILQ_EMPTY(head) (STAILQ_FIRST(head)
 == STAILQ_END(head))

/*
* Singly-linked Tail queue functions.
*/
#define STAILQ_INIT(head) do {      \
 (head)->stqh_first = NULL;     \
 (head)->stqh_last = &(head)->stqh_first;    \
} while (/*CONSTCOND*/0)

#define STAILQ_INSERT_HEAD(head, elm, field) do {   \
 if (((elm)->field.stqe_next = (head)->stqh_first) == NULL) \
  (head)->stqh_last = &(elm)->field.stqe_next;  \
 (head)->stqh_first = (elm);     \
} while (/*CONSTCOND*/0)

#define STAILQ_INSERT_TAIL(head, elm, field) do {   \
 (elm)->field.stqe_next = NULL;     \
 *(head)->stqh_last = (elm);     \
 (head)->stqh_last = &(elm)->field.stqe_next;   \
} while (/*CONSTCOND*/0)

#define STAILQ_INSERT_AFTER(head, listelm, elm, field) do {  \
 if (((elm)->field.stqe_next = (listelm)->field.stqe_next) == NULL)\
  (head)->stqh_last = &(elm)->field.stqe_next;  \
 (listelm)->field.stqe_next = (elm);    \
} while (/*CONSTCOND*/0)
```

```
#define STAILQ_REMOVE_HEAD(head, field) do {    \
 if (((head)->stqh_first = (head)->stqh_first->field.stqe_next)
 == NULL) \
  (head)->stqh_last = &(head)->stqh_first;   \
} while (/*CONSTCOND*/0)

#define STAILQ_REMOVE(head, elm, type, field) do {   \
 if ((head)->stqh_first == (elm)) {    \
  STAILQ_REMOVE_HEAD((head), field);   \
 } else {       \
  struct type *curelm = (head)->stqh_first;  \
  while (curelm->field.stqe_next != (elm))   \
   curelm = curelm->field.stqe_next;  \
  if ((curelm->field.stqe_next =    \
   curelm->field.stqe_next->field.stqe_next) == NULL) \
      (head)->stqh_last = &(curelm)->field.stqe_next; \
 }       \
} while (/*CONSTCOND*/0)

#define STAILQ_FOREACH(var, head, field)    \
 for ((var) = ((head)->stqh_first);    \
  (var);       \
  (var) = ((var)->field.stqe_next))

#define STAILQ_FOREACH_SAFE(var, head, field, tvar)   \
 for ((var) = STAILQ_FIRST((head));    \
    (var) && ((tvar) = STAILQ_NEXT((var), field), 1);  \
    (var) = (tvar))

#define STAILQ_CONCAT(head1, head2) do {    \
 if (!STAILQ_EMPTY((head2))) {     \
  *(head1)->stqh_last
 = (head2)->stqh_first;  \
  (head1)->stqh_last = (head2)->stqh_last;  \
  STAILQ_INIT((head2));     \
 }       \
} while (/*CONSTCOND*/0)

#define STAILQ_LAST(head, type, field)     \
 (STAILQ_EMPTY((head)) ?      \
  NULL :       \
       ((struct type *)(void *)    \
  ((char *)((head)->stqh_last) - offsetof(struct type, field))))


#ifndef _KERNEL
/*
```

```
* Circular queue definitions. Do not use. We still keep the macros
* for compatibility but because of pointer aliasing issues their use
* is discouraged!
*/

/*
* __launder_type():  We use this ugly hack to work around the the compiler
* noticing that two types may not alias each other and elide tests in code.
* We hit this in the CIRCLEQ macros when comparing 'struct name *' and
* 'struct type *' (see CIRCLEQ_HEAD()).  Modern compilers (such as GCC
* 4.8) declare these comparisons as always false, causing the code to
* not run as designed.
*
* This hack is only to be used for comparisons and thus can be fully const.
 * Do not use for assignment.
*
* If we ever choose to change the ABI of the CIRCLEQ macros, we could fix
* this by changing the head/tail sentinal values, but see the note above
* this one.
*/
static __inline const void * __launder_type(const void *);
static __inline const void *
__launder_type(const void *__x)
{
 __asm __volatile("" : "+r" (__x));
 return __x;
}

#if defined(QUEUEDEBUG)
#define QUEUEDEBUG_CIRCLEQ_HEAD(head, field)    \
 if ((head)->cqh_first != CIRCLEQ_ENDC(head) &&   \
    (head)->cqh_first->field.cqe_prev != CIRCLEQ_ENDC(head)) \
  QUEUEDEBUG_ABORT("CIRCLEQ head forw %p %s:%d", (head), \
       __FILE__, __LINE__);    \
 if ((head)->cqh_last != CIRCLEQ_ENDC(head) &&   \
    (head)->cqh_last->field.cqe_next != CIRCLEQ_ENDC(head)) \
  QUEUEDEBUG_ABORT("CIRCLEQ head back %p %s:%d", (head), \
       __FILE__, __LINE__);
#define QUEUEDEBUG_CIRCLEQ_ELM(head, elm, field)   \
 if ((elm)->field.cqe_next == CIRCLEQ_ENDC(head)) {  \
  if ((head)->cqh_last != (elm))    \
   QUEUEDEBUG_ABORT("CIRCLEQ
 elm last %p %s:%d", \
      (elm), __FILE__, __LINE__);   \
 } else {       \
  if ((elm)->field.cqe_next->field.cqe_prev != (elm)) \
   QUEUEDEBUG_ABORT("CIRCLEQ elm forw %p %s:%d", \
      (elm), __FILE__, __LINE__);   \
```

```
 }       \
 if ((elm)->field.cqe_prev == CIRCLEQ_ENDC(head)) {  \
  if ((head)->cqh_first != (elm))    \
   QUEUEDEBUG_ABORT("CIRCLEQ elm first %p %s:%d", \
       (elm), __FILE__, __LINE__);   \
 } else {       \
  if ((elm)->field.cqe_prev->field.cqe_next != (elm)) \
   QUEUEDEBUG_ABORT("CIRCLEQ elm prev %p %s:%d", \
       (elm), __FILE__, __LINE__);   \
 }
#define QUEUEDEBUG_CIRCLEQ_POSTREMOVE(elm, field)   \
 (elm)->field.cqe_next = (void *)1L;    \
 (elm)->field.cqe_prev = (void *)1L;
#else
#define QUEUEDEBUG_CIRCLEQ_HEAD(head, field)
#define QUEUEDEBUG_CIRCLEQ_ELM(head, elm, field)
#define QUEUEDEBUG_CIRCLEQ_POSTREMOVE(elm, field)
#endif

#define CIRCLEQ_HEAD(name, type)     \
struct name {        \
 struct type *cqh_first;  /*
 first element */  \
 struct type *cqh_last;  /* last element */  \
}

#define CIRCLEQ_HEAD_INITIALIZER(head)     \
 { CIRCLEQ_END(&head), CIRCLEQ_END(&head) }

#define CIRCLEQ_ENTRY(type)      \
struct {        \
 struct type *cqe_next;  /* next element */  \
 struct type *cqe_prev;  /* previous element */  \
}

/*
* Circular queue functions.
*/
#define CIRCLEQ_INIT(head) do {      \
 (head)->cqh_first = CIRCLEQ_END(head);    \
 (head)->cqh_last = CIRCLEQ_END(head);    \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_INSERT_AFTER(head, listelm, elm, field) do {  \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 QUEUEDEBUG_CIRCLEQ_ELM((head), (listelm), field)  \
 (elm)->field.cqe_next = (listelm)->field.cqe_next;  \
 (elm)->field.cqe_prev = (listelm);    \
```

```
 if ((listelm)->field.cqe_next == CIRCLEQ_ENDC(head))  \
  (head)->cqh_last = (elm);    \
 else       \
  (listelm)->field.cqe_next->field.cqe_prev = (elm); \
 (listelm)->field.cqe_next = (elm);    \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_INSERT_BEFORE(head,
 listelm, elm, field) do {  \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 QUEUEDEBUG_CIRCLEQ_ELM((head), (listelm), field)  \
 (elm)->field.cqe_next = (listelm);    \
 (elm)->field.cqe_prev = (listelm)->field.cqe_prev;  \
 if ((listelm)->field.cqe_prev == CIRCLEQ_ENDC(head))  \
  (head)->cqh_first = (elm);    \
 else       \
  (listelm)->field.cqe_prev->field.cqe_next = (elm); \
 (listelm)->field.cqe_prev = (elm);    \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_INSERT_HEAD(head, elm, field) do {   \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 (elm)->field.cqe_next = (head)->cqh_first;   \
 (elm)->field.cqe_prev = CIRCLEQ_END(head);   \
 if ((head)->cqh_last == CIRCLEQ_ENDC(head))   \
  (head)->cqh_last = (elm);    \
 else       \
  (head)->cqh_first->field.cqe_prev = (elm);  \
 (head)->cqh_first = (elm);     \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_INSERT_TAIL(head, elm, field) do {   \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 (elm)->field.cqe_next
 = CIRCLEQ_END(head);   \
 (elm)->field.cqe_prev = (head)->cqh_last;   \
 if ((head)->cqh_first == CIRCLEQ_ENDC(head))   \
  (head)->cqh_first = (elm);    \
 else       \
  (head)->cqh_last->field.cqe_next = (elm);  \
 (head)->cqh_last = (elm);     \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_REMOVE(head, elm, field) do {    \
 QUEUEDEBUG_CIRCLEQ_HEAD((head), field)    \
 QUEUEDEBUG_CIRCLEQ_ELM((head), (elm), field)   \
 if ((elm)->field.cqe_next == CIRCLEQ_ENDC(head))  \
  (head)->cqh_last = (elm)->field.cqe_prev;  \
```

```
 else       \
  (elm)->field.cqe_next->field.cqe_prev =   \
      (elm)->field.cqe_prev;    \
 if ((elm)->field.cqe_prev == CIRCLEQ_ENDC(head))  \
  (head)->cqh_first = (elm)->field.cqe_next;  \
 else       \
  (elm)->field.cqe_prev->field.cqe_next =   \
      (elm)->field.cqe_next;    \
 QUEUEDEBUG_CIRCLEQ_POSTREMOVE((elm), field)   \
} while (/*CONSTCOND*/0)

#define CIRCLEQ_FOREACH(var, head, field)    \
 for ((var) = ((head)->cqh_first);    \
  (var) != CIRCLEQ_ENDC(head);    \
  (var)
 = ((var)->field.cqe_next))

#define CIRCLEQ_FOREACH_REVERSE(var, head, field)   \
 for ((var) = ((head)->cqh_last);    \
  (var) != CIRCLEQ_ENDC(head);    \
  (var) = ((var)->field.cqe_prev))

/*
* Circular queue access methods.
*/
#define CIRCLEQ_FIRST(head)  ((head)->cqh_first)
#define CIRCLEQ_LAST(head)  ((head)->cqh_last)
/* For comparisons */
#define CIRCLEQ_ENDC(head)  (__launder_type(head))
/* For assignments */
#define CIRCLEQ_END(head)  ((void *)(head))
#define CIRCLEQ_NEXT(elm, field) ((elm)->field.cqe_next)
#define CIRCLEQ_PREV(elm, field) ((elm)->field.cqe_prev)
#define CIRCLEQ_EMPTY(head)      \
   (CIRCLEQ_FIRST(head) == CIRCLEQ_ENDC(head))

#define CIRCLEQ_LOOP_NEXT(head, elm, field)    \
 (((elm)->field.cqe_next == CIRCLEQ_ENDC(head))   \
     ? ((head)->cqh_first)     \
     : (elm->field.cqe_next))
#define CIRCLEQ_LOOP_PREV(head, elm, field)    \
 (((elm)->field.cqe_prev == CIRCLEQ_ENDC(head))   \
     ? ((head)->cqh_last)     \
     :
 (elm->field.cqe_prev))
#endif /* !_KERNEL */

#endif /* !_SYS_QUEUE_H_ */
```

```
# Contributor: Fabian Affolter <fabian@affolter-engineering.ch>
# Maintainer: Fabian Affolter <fabian@affolter-engineering.ch>
pkgname=py3-flake8-copyright
_pkgname=flake8-copyright
pkgver=0.2.4
pkgrel=3
pkgdesc="Extension for flake8 which checks for copyrights"
options="!check" # No testsuite
url="https://github.com/savoirfairelinux/flake8-copyright"
arch="noarch"
license="MIT"
depends="py3-flake8 py3-setuptools"
makedepends="py3-gpep517 py3-wheel"
subpackages="$pkgname-pyc"
source="https://files.pythonhosted.org/packages/source/${_pkgname:0:1}/$_pkgname/$_pkgname-$pkgver.tar.gz"
builddir="$srcdir"/$_pkgname-$pkgver

replaces="py-flake8-copyright"                  # Backwards compatibility
provides="py-flake8-copyright=$pkgver-r$pkgrel" # Backwards compatibility

build() {
 gpep517 build-wheel \
  --wheel-dir .dist \
  --output-fd 3 3>&1 >&2
}

package() {
 gpep517 install-wheel --destdir "$pkgdir" \
  .dist/*.whl
}

sha512sums="
a6ab47e1bb715618f075c51f398e18180404871b3b0faf1c2d30701d5203db6bc23771bf22ffb5bafcd8ee856b9b64237
b316bd503ae7dceed6ca284ccd5a74d
  flake8-copyright-0.2.4.tar.gz
"
#ifndef _SYS_CDEFS_H_
#define _SYS_CDEFS_H_

#warning usage of non-standard #include <sys/cdefs.h> is deprecated

#undef __P
#undef __PMT

#define __P(args) args
#define __PMT(args) args

#define __CONCAT(x,y) x ## y
```

```
#define __STRING(x) #x

#ifdef  __cplusplus
# define __BEGIN_DECLS extern "C" {
# define __END_DECLS }
#else
# define __BEGIN_DECLS
# define __END_DECLS
#endif

#if defined(__GNUC__) && !defined(__cplusplus)
# define __THROW __attribute__ ((__nothrow__))
# define __NTH(fct) __attribute__ ((__nothrow__)) fct
#else
# define __THROW
# define __NTH(fct)     fct
#endif

#endif /* _SYS_CDEFS_H_ */
/* $NetBSD: tree.h,v 1.20 2013/09/14 13:20:45 joerg Exp $ */
/* $OpenBSD: tree.h,v 1.13 2011/07/09 00:19:45 pirofti Exp $ */
/* Modified by Void Linux. */
/*
* Copyright 2002 Niels Provos <provos@citi.umich.edu>
* All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the above copyright
*    notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*    notice, this list of conditions and the following disclaimer in the
*    documentation and/or other materials provided with the distribution.
*
* THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
* IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
* OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
* IN NO EVENT SHALL THE
 AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
* INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
* DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
* THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
* THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
*/
```

```
#ifndef _SYS_TREE_H_
#define _SYS_TREE_H_

#ifdef __GNUC__
#define __GNUC_PREREQ__(x, y)      \
 ((__GNUC__ == (x) && __GNUC_MINOR__ >= (y)) ||   \
  (__GNUC__ > (x)))
#else
#define __GNUC_PREREQ__(x, y) 0
#endif

#if __GNUC_PREREQ__(2, 7) || defined(__lint__)
#define _sys_tree_h_unused __attribute__((__unused__))
#else
#define _sys_tree_h_unused /* delete */
#endif

/*
* This file defines data structures for different types of trees:
* splay trees and red-black trees.
*
* A splay tree is a self-organizing
 data structure.  Every operation
* on the tree causes a splay to happen.  The splay moves the requested
* node to the root of the tree and partly rebalances it.
*
* This has the benefit that request locality causes faster lookups as
* the requested nodes move to the top of the tree.  On the other hand,
* every lookup causes memory writes.
*
* The Balance Theorem bounds the total access time for m operations
* and n inserts on an initially empty tree as O((m + n)lg n).  The
* amortized cost for a sequence of m accesses to a splay tree is O(lg n);
*
* A red-black tree is a binary search tree with the node color as an
* extra attribute.  It fulfills a set of conditions:
* - every search path from the root to a leaf consists of the
*   same number of black nodes,
* - each red node (except for the root) has a black parent,
* - each leaf node is black.
*
* Every operation on a red-black tree is bounded as O(lg n).
* The maximum height of a red-black tree is 2lg (n+1).
 */

#define SPLAY_HEAD(name, type)      \
struct name {       \
 struct type *sph_root; /* root of the tree */   \
```

```
}

#define SPLAY_INITIALIZER(root)      \
 { NULL }

#define SPLAY_INIT(root) do {      \
 (root)->sph_root = NULL;     \
} while (/*CONSTCOND*/ 0)

#define SPLAY_ENTRY(type)      \
struct {        \
 struct type *spe_left; /* left element */   \
 struct type *spe_right; /* right element */   \
}

#define SPLAY_LEFT(elm, field)  (elm)->field.spe_left
#define SPLAY_RIGHT(elm, field)  (elm)->field.spe_right
#define SPLAY_ROOT(head)  (head)->sph_root
#define SPLAY_EMPTY(head)  (SPLAY_ROOT(head) == NULL)

/* SPLAY_ROTATE_{LEFT,RIGHT} expect that tmp hold SPLAY_{RIGHT,LEFT} */
#define SPLAY_ROTATE_RIGHT(head, tmp, field) do {   \
 SPLAY_LEFT((head)->sph_root, field) = SPLAY_RIGHT(tmp, field); \
 SPLAY_RIGHT(tmp, field) = (head)->sph_root;   \
 (head)->sph_root = tmp;      \
} while (/*CONSTCOND*/ 0)

#define SPLAY_ROTATE_LEFT(head, tmp, field) do {   \
 SPLAY_RIGHT((head)->sph_root,
 field) = SPLAY_LEFT(tmp, field); \
 SPLAY_LEFT(tmp, field) = (head)->sph_root;   \
 (head)->sph_root = tmp;      \
} while (/*CONSTCOND*/ 0)

#define SPLAY_LINKLEFT(head, tmp, field) do {    \
 SPLAY_LEFT(tmp, field) = (head)->sph_root;   \
 tmp = (head)->sph_root;      \
 (head)->sph_root = SPLAY_LEFT((head)->sph_root, field);  \
} while (/*CONSTCOND*/ 0)

#define SPLAY_LINKRIGHT(head, tmp, field) do {    \
 SPLAY_RIGHT(tmp, field) = (head)->sph_root;   \
 tmp = (head)->sph_root;      \
 (head)->sph_root = SPLAY_RIGHT((head)->sph_root, field); \
} while (/*CONSTCOND*/ 0)

#define SPLAY_ASSEMBLE(head, node, left, right, field) do {  \
 SPLAY_RIGHT(left, field) = SPLAY_LEFT((head)->sph_root, field); \
```

```
 SPLAY_LEFT(right, field) = SPLAY_RIGHT((head)->sph_root, field);\
 SPLAY_LEFT((head)->sph_root, field) = SPLAY_RIGHT(node, field); \
 SPLAY_RIGHT((head)->sph_root, field) = SPLAY_LEFT(node, field); \
} while (/*CONSTCOND*/ 0)

/* Generates prototypes and inline functions */

#define
 SPLAY_PROTOTYPE(name, type, field, cmp)    \
void name##_SPLAY(struct name *, struct type *);   \
void name##_SPLAY_MINMAX(struct name *, int);    \
struct type *name##_SPLAY_INSERT(struct name *, struct type *);  \
struct type *name##_SPLAY_REMOVE(struct name *, struct type *);  \
        \
/* Finds the node with the same key as elm */    \
static __inline struct type *      \
name##_SPLAY_FIND(struct name *head, struct type *elm)   \
{        \
 if (SPLAY_EMPTY(head))      \
  return(NULL);      \
 name##_SPLAY(head, elm);     \
 if ((cmp)(elm, (head)->sph_root) == 0)    \
  return (head->sph_root);    \
 return (NULL);       \
}        \
        \
static __inline _sys_tree_h_unused struct type *   \
name##_SPLAY_NEXT(struct name *head, struct type *elm)   \
{        \
 name##_SPLAY(head, elm);     \
 if (SPLAY_RIGHT(elm, field) != NULL) {    \
  elm = SPLAY_RIGHT(elm, field);    \
  while (SPLAY_LEFT(elm, field) != NULL) {  \
   elm = SPLAY_LEFT(elm, field);   \
  }       \
 }
 else       \
  elm = NULL;      \
 return (elm);       \
}        \
        \
static _sys_tree_h_unused __inline struct type *   \
name##_SPLAY_MIN_MAX(struct name *head, int val)   \
{        \
 name##_SPLAY_MINMAX(head, val);     \
       return (SPLAY_ROOT(head));     \
}
```

```
/* Main splay operation.
* Moves node close to the key of elm to top
*/
#define SPLAY_GENERATE(name, type, field, cmp)    \
struct type *       \
name##_SPLAY_INSERT(struct name *head, struct type *elm)  \
{       \
  if (SPLAY_EMPTY(head)) {      \
    SPLAY_LEFT(elm, field) = SPLAY_RIGHT(elm, field) = NULL; \
  } else {       \
    int __comp;       \
    name##_SPLAY(head, elm);     \
    __comp = (cmp)(elm, (head)->sph_root);   \
    if(__comp < 0) {      \
     SPLAY_LEFT(elm, field) = SPLAY_LEFT((head)->sph_root, field);\
     SPLAY_RIGHT(elm, field) = (head)->sph_root;  \
     SPLAY_LEFT((head)->sph_root, field) = NULL;  \
    } else if (__comp > 0) {     \
     SPLAY_RIGHT(elm,
 field) = SPLAY_RIGHT((head)->sph_root, field);\
     SPLAY_LEFT(elm, field) = (head)->sph_root;  \
     SPLAY_RIGHT((head)->sph_root, field) = NULL; \
    } else       \
     return ((head)->sph_root);    \
  }        \
  (head)->sph_root = (elm);      \
  return (NULL);       \
}       \
       \
struct type *       \
name##_SPLAY_REMOVE(struct name *head, struct type *elm)  \
{       \
 struct type *__tmp;      \
 if (SPLAY_EMPTY(head))      \
  return (NULL);      \
 name##_SPLAY(head, elm);     \
 if ((cmp)(elm, (head)->sph_root) == 0) {   \
  if (SPLAY_LEFT((head)->sph_root, field) == NULL) { \
   (head)->sph_root = SPLAY_RIGHT((head)->sph_root, field);\
  } else {      \
   __tmp = SPLAY_RIGHT((head)->sph_root, field); \
   (head)->sph_root = SPLAY_LEFT((head)->sph_root, field);\
   name##_SPLAY(head, elm);   \
   SPLAY_RIGHT((head)->sph_root, field) = __tmp; \
  }       \
  return (elm);      \
 }       \
 return (NULL);       \
```

```
}       \
       \
void       \
name##_SPLAY(struct
 name *head, struct type *elm)   \
{       \
 struct type __node, *__left, *__right, *__tmp;   \
 int __comp;      \
\
 SPLAY_LEFT(&__node, field) = SPLAY_RIGHT(&__node, field) = NULL;\
 __left = __right = &__node;     \
\
 while ((__comp = (cmp)(elm, (head)->sph_root)) != 0) {  \
  if (__comp < 0) {     \
   __tmp = SPLAY_LEFT((head)->sph_root, field); \
   if (__tmp == NULL)    \
    break;     \
   if ((cmp)(elm, __tmp) < 0){   \
    SPLAY_ROTATE_RIGHT(head, __tmp, field); \
    if (SPLAY_LEFT((head)->sph_root, field) == NULL)\
     break;    \
   }      \
   SPLAY_LINKLEFT(head, __right, field);  \
  } else if (__comp > 0) {    \
   __tmp = SPLAY_RIGHT((head)->sph_root, field); \
   if (__tmp == NULL)    \
    break;     \
   if ((cmp)(elm, __tmp) > 0){   \
    SPLAY_ROTATE_LEFT(head, __tmp, field); \
    if (SPLAY_RIGHT((head)->sph_root, field) == NULL)\
     break;    \
   }      \
   SPLAY_LINKRIGHT(head, __left, field);  \
  }       \
 }       \
 SPLAY_ASSEMBLE(head,
 &__node, __left, __right, field);  \
}       \
       \
/* Splay with either the minimum or the maximum element   \
* Used to find minimum or maximum element in tree.   \
*/       \
void name##_SPLAY_MINMAX(struct name *head, int __comp) \
{       \
 struct type __node, *__left, *__right, *__tmp;   \
\
 SPLAY_LEFT(&__node, field) = SPLAY_RIGHT(&__node, field) = NULL;\
 __left = __right = &__node;     \
```

```
\
 while (1) {       \
  if (__comp < 0) {     \
   __tmp = SPLAY_LEFT((head)->sph_root, field); \
   if (__tmp == NULL)    \
    break;     \
   if (__comp < 0){    \
    SPLAY_ROTATE_RIGHT(head, __tmp, field); \
    if (SPLAY_LEFT((head)->sph_root, field) == NULL)\
     break;    \
   }      \
   SPLAY_LINKLEFT(head, __right, field);  \
  } else if (__comp > 0) {    \
   __tmp = SPLAY_RIGHT((head)->sph_root, field); \
   if (__tmp == NULL)    \
    break;     \
   if (__comp > 0) {    \
    SPLAY_ROTATE_LEFT(head, __tmp, field); \
    if (SPLAY_RIGHT((head)->sph_root,
 field) == NULL)\
     break;    \
   }      \
   SPLAY_LINKRIGHT(head, __left, field);  \
  }       \
 }       \
 SPLAY_ASSEMBLE(head, &__node, __left, __right, field);  \
}

#define SPLAY_NEGINF -1
#define SPLAY_INF 1

#define SPLAY_INSERT(name, x, y) name##_SPLAY_INSERT(x, y)
#define SPLAY_REMOVE(name, x, y) name##_SPLAY_REMOVE(x, y)
#define SPLAY_FIND(name, x, y)  name##_SPLAY_FIND(x, y)
#define SPLAY_NEXT(name, x, y)  name##_SPLAY_NEXT(x, y)
#define SPLAY_MIN(name, x)  (SPLAY_EMPTY(x) ? NULL \
    : name##_SPLAY_MIN_MAX(x, SPLAY_NEGINF))
#define SPLAY_MAX(name, x)  (SPLAY_EMPTY(x) ? NULL \
    : name##_SPLAY_MIN_MAX(x, SPLAY_INF))

#define SPLAY_FOREACH(x, name, head)     \
 for ((x) = SPLAY_MIN(name, head);    \
     (x) != NULL;      \
     (x) = SPLAY_NEXT(name, head, x))

/* Macros that define a red-black tree */
#define RB_HEAD(name, type)      \
struct name {        \
```

```
 struct type *rbh_root; /* root of the tree */   \
}

#define RB_INITIALIZER(root)      \
 {
 NULL }

#define RB_INIT(root) do {      \
 (root)->rbh_root = NULL;     \
} while (/*CONSTCOND*/ 0)

#define RB_BLACK 0
#define RB_RED  1
#define RB_ENTRY(type)       \
struct {        \
 struct type *rbe_left;  /* left element */  \
 struct type *rbe_right;  /* right element */  \
 struct type *rbe_parent; /* parent element */  \
 int rbe_color;   /* node color */  \
}

#define RB_LEFT(elm, field)  (elm)->field.rbe_left
#define RB_RIGHT(elm, field)  (elm)->field.rbe_right
#define RB_PARENT(elm, field)  (elm)->field.rbe_parent
#define RB_COLOR(elm, field)  (elm)->field.rbe_color
#define RB_ROOT(head)   (head)->rbh_root
#define RB_EMPTY(head)   (RB_ROOT(head) == NULL)

#define RB_SET(elm, parent, field) do {     \
 RB_PARENT(elm, field) = parent;     \
 RB_LEFT(elm, field) = RB_RIGHT(elm, field) = NULL;  \
 RB_COLOR(elm, field) = RB_RED;     \
} while (/*CONSTCOND*/ 0)

#define RB_SET_BLACKRED(black, red, field) do {    \
 RB_COLOR(black, field) = RB_BLACK;    \
 RB_COLOR(red, field)
 = RB_RED;     \
} while (/*CONSTCOND*/ 0)

#ifndef RB_AUGMENT
#define RB_AUGMENT(x) do {} while (/*CONSTCOND*/ 0)
#endif

#define RB_ROTATE_LEFT(head, elm, tmp, field) do {   \
 (tmp) = RB_RIGHT(elm, field);     \
 if ((RB_RIGHT(elm, field) = RB_LEFT(tmp, field)) != NULL) { \
  RB_PARENT(RB_LEFT(tmp, field), field) = (elm);  \
```

```
 }       \
 RB_AUGMENT(elm);      \
 if ((RB_PARENT(tmp, field) = RB_PARENT(elm, field)) != NULL) { \
  if ((elm) == RB_LEFT(RB_PARENT(elm, field), field)) \
   RB_LEFT(RB_PARENT(elm, field), field) = (tmp); \
  else      \
   RB_RIGHT(RB_PARENT(elm, field), field) = (tmp); \
 } else       \
  (head)->rbh_root = (tmp);    \
 RB_LEFT(tmp, field) = (elm);     \
 RB_PARENT(elm, field) = (tmp);     \
 RB_AUGMENT(tmp);      \
 if ((RB_PARENT(tmp, field)))     \
  RB_AUGMENT(RB_PARENT(tmp, field));   \
} while (/*CONSTCOND*/ 0)

#define RB_ROTATE_RIGHT(head, elm, tmp, field) do {   \
 (tmp) = RB_LEFT(elm, field);     \
 if ((RB_LEFT(elm, field) = RB_RIGHT(tmp, field))
 != NULL) { \
  RB_PARENT(RB_RIGHT(tmp, field), field) = (elm);  \
 }       \
 RB_AUGMENT(elm);      \
 if ((RB_PARENT(tmp, field) = RB_PARENT(elm, field)) != NULL) { \
  if ((elm) == RB_LEFT(RB_PARENT(elm, field), field)) \
   RB_LEFT(RB_PARENT(elm, field), field) = (tmp); \
  else      \
   RB_RIGHT(RB_PARENT(elm, field), field) = (tmp); \
 } else       \
  (head)->rbh_root = (tmp);    \
 RB_RIGHT(tmp, field) = (elm);     \
 RB_PARENT(elm, field) = (tmp);     \
 RB_AUGMENT(tmp);      \
 if ((RB_PARENT(tmp, field)))     \
  RB_AUGMENT(RB_PARENT(tmp, field));   \
} while (/*CONSTCOND*/ 0)

/* Generates prototypes and inline functions */
#define RB_PROTOTYPE(name, type, field, cmp)    \
 RB_PROTOTYPE_INTERNAL(name, type, field, cmp,)
#define RB_PROTOTYPE_STATIC(name, type, field, cmp)   \
 RB_PROTOTYPE_INTERNAL(name, type, field, cmp, _sys_tree_h_unused static)
#define RB_PROTOTYPE_INTERNAL(name, type, field, cmp, attr)  \
attr void name##_RB_INSERT_COLOR(struct name *, struct
 type *);  \
attr void name##_RB_REMOVE_COLOR(struct name *, struct type *, struct type *);\
attr struct type *name##_RB_REMOVE(struct name *, struct type *); \
attr struct type *name##_RB_INSERT(struct name *, struct type *); \
```

```
attr struct type *name##_RB_FIND(struct name *, struct type *);  \
attr struct type *name##_RB_NFIND(struct name *, struct type *); \
attr struct type *name##_RB_NEXT(struct type *);   \
attr struct type *name##_RB_PREV(struct type *);   \
attr struct type *name##_RB_MINMAX(struct name *, int);   \
        \

/* Main rb operation.
* Moves node close to the key of elm to top
*/
#define RB_GENERATE(name, type, field, cmp)    \
 RB_GENERATE_INTERNAL(name, type, field, cmp,)
#define RB_GENERATE_STATIC(name, type, field, cmp)   \
 RB_GENERATE_INTERNAL(name, type, field, cmp, _sys_tree_h_unused static)
#define RB_GENERATE_INTERNAL(name, type, field, cmp, attr)  \
attr void       \
name##_RB_INSERT_COLOR(struct name *head, struct type *elm)  \
{       \
 struct type
 *parent, *gparent, *tmp;    \
 while ((parent = RB_PARENT(elm, field)) != NULL &&  \
     RB_COLOR(parent, field) == RB_RED) {   \
  gparent = RB_PARENT(parent, field);   \
  if (parent == RB_LEFT(gparent, field)) {  \
   tmp = RB_RIGHT(gparent, field);   \
   if (tmp && RB_COLOR(tmp, field) == RB_RED) { \
    RB_COLOR(tmp, field) = RB_BLACK; \
    RB_SET_BLACKRED(parent, gparent, field);\
    elm = gparent;    \
    continue;    \
   }      \
   if (RB_RIGHT(parent, field) == elm) {  \
    RB_ROTATE_LEFT(head, parent, tmp, field);\
    tmp = parent;    \
    parent = elm;    \
    elm = tmp;    \
   }      \
   RB_SET_BLACKRED(parent, gparent, field); \
   RB_ROTATE_RIGHT(head, gparent, tmp, field); \
  } else {      \
   tmp = RB_LEFT(gparent, field);   \
   if (tmp && RB_COLOR(tmp, field) == RB_RED) { \
    RB_COLOR(tmp, field) = RB_BLACK; \
    RB_SET_BLACKRED(parent, gparent, field);\
    elm = gparent;    \
    continue;    \
   }      \
   if (RB_LEFT(parent, field) == elm)
```

```
 {  \
   RB_ROTATE_RIGHT(head, parent, tmp, field);\
   tmp = parent;    \
   parent = elm;    \
   elm = tmp;    \
  }      \
  RB_SET_BLACKRED(parent, gparent, field); \
  RB_ROTATE_LEFT(head, gparent, tmp, field); \
 }       \
 }       \
 RB_COLOR(head->rbh_root, field) = RB_BLACK;   \
}        \
        \
attr void        \
name##_RB_REMOVE_COLOR(struct name *head, struct type *parent, struct type *elm) \
{        \
 struct type *tmp;      \
 while ((elm == NULL || RB_COLOR(elm, field) == RB_BLACK) && \
     elm != RB_ROOT(head)) {     \
  if (RB_LEFT(parent, field) == elm) {    \
   tmp = RB_RIGHT(parent, field);    \
   if (RB_COLOR(tmp, field) == RB_RED) {  \
    RB_SET_BLACKRED(tmp, parent, field); \
    RB_ROTATE_LEFT(head, parent, tmp, field);\
    tmp = RB_RIGHT(parent, field);  \
   }      \
   if ((RB_LEFT(tmp, field) == NULL ||  \
       RB_COLOR(RB_LEFT(tmp, field), field) == RB_BLACK) &&\
       (RB_RIGHT(tmp, field) == NULL ||  \
       RB_COLOR(RB_RIGHT(tmp,
 field), field) == RB_BLACK)) {\
    RB_COLOR(tmp, field) = RB_RED;  \
    elm = parent;    \
    parent = RB_PARENT(elm, field);  \
   } else {     \
    if (RB_RIGHT(tmp, field) == NULL || \
        RB_COLOR(RB_RIGHT(tmp, field), field) == RB_BLACK) {\
     struct type *oleft;  \
     if ((oleft = RB_LEFT(tmp, field)) \
         != NULL)   \
      RB_COLOR(oleft, field) = RB_BLACK;\
     RB_COLOR(tmp, field) = RB_RED; \
     RB_ROTATE_RIGHT(head, tmp, oleft, field);\
     tmp = RB_RIGHT(parent, field); \
    }     \
    RB_COLOR(tmp, field) = RB_COLOR(parent, field);\
    RB_COLOR(parent, field) = RB_BLACK; \
    if (RB_RIGHT(tmp, field))  \
```

```
    RB_COLOR(RB_RIGHT(tmp, field), field) = RB_BLACK;\
   RB_ROTATE_LEFT(head, parent, tmp, field);\
   elm = RB_ROOT(head);   \
   break;     \
  }      \
 } else {      \
  tmp = RB_LEFT(parent, field);   \
  if (RB_COLOR(tmp, field) == RB_RED) {  \
   RB_SET_BLACKRED(tmp, parent, field); \
   RB_ROTATE_RIGHT(head, parent, tmp, field);\
   tmp
= RB_LEFT(parent, field);  \
  }      \
  if ((RB_LEFT(tmp, field) == NULL ||  \
      RB_COLOR(RB_LEFT(tmp, field), field) == RB_BLACK) &&\
      (RB_RIGHT(tmp, field) == NULL ||  \
      RB_COLOR(RB_RIGHT(tmp, field), field) == RB_BLACK)) {\
   RB_COLOR(tmp, field) = RB_RED;  \
   elm = parent;    \
   parent = RB_PARENT(elm, field);  \
  } else {     \
   if (RB_LEFT(tmp, field) == NULL || \
       RB_COLOR(RB_LEFT(tmp, field), field) == RB_BLACK) {\
    struct type *oright;  \
    if ((oright = RB_RIGHT(tmp, field)) \
        != NULL)   \
     RB_COLOR(oright, field) = RB_BLACK;\
    RB_COLOR(tmp, field) = RB_RED; \
    RB_ROTATE_LEFT(head, tmp, oright, field);\
    tmp = RB_LEFT(parent, field); \
   }     \
   RB_COLOR(tmp, field) = RB_COLOR(parent, field);\
   RB_COLOR(parent, field) = RB_BLACK; \
   if (RB_LEFT(tmp, field))  \
    RB_COLOR(RB_LEFT(tmp, field), field) = RB_BLACK;\
   RB_ROTATE_RIGHT(head, parent, tmp, field);\
   elm = RB_ROOT(head);   \
   break;     \
  }      \
 }       \
}        \
 if
(elm)       \
 RB_COLOR(elm, field) = RB_BLACK;   \
}        \
        \
attr struct type *       \
name##_RB_REMOVE(struct name *head, struct type *elm)   \
```

```
{       \
 struct type *child, *parent, *old = elm;   \
 int color;      \
 if (RB_LEFT(elm, field) == NULL)    \
  child = RB_RIGHT(elm, field);    \
 else if (RB_RIGHT(elm, field) == NULL)    \
  child = RB_LEFT(elm, field);    \
 else {       \
  struct type *left;     \
  elm = RB_RIGHT(elm, field);    \
  while ((left = RB_LEFT(elm, field)) != NULL)  \
   elm = left;     \
  child = RB_RIGHT(elm, field);    \
  parent = RB_PARENT(elm, field);    \
  color = RB_COLOR(elm, field);    \
  if (child)      \
   RB_PARENT(child, field) = parent;  \
  if (parent) {      \
   if (RB_LEFT(parent, field) == elm)  \
    RB_LEFT(parent, field) = child;  \
   else      \
    RB_RIGHT(parent, field) = child; \
   RB_AUGMENT(parent);    \
  } else       \
   RB_ROOT(head)
 = child;    \
  if (RB_PARENT(elm, field) == old)   \
   parent = elm;     \
  (elm)->field = (old)->field;    \
  if (RB_PARENT(old, field)) {    \
   if (RB_LEFT(RB_PARENT(old, field), field) == old)\
    RB_LEFT(RB_PARENT(old, field), field) = elm;\
   else      \
    RB_RIGHT(RB_PARENT(old, field), field) = elm;\
   RB_AUGMENT(RB_PARENT(old, field));  \
  } else       \
   RB_ROOT(head) = elm;    \
  RB_PARENT(RB_LEFT(old, field), field) = elm;  \
  if (RB_RIGHT(old, field))    \
   RB_PARENT(RB_RIGHT(old, field), field) = elm; \
  if (parent) {      \
   left = parent;     \
   do {      \
    RB_AUGMENT(left);   \
   } while ((left = RB_PARENT(left, field)) != NULL); \
  }       \
  goto color;      \
 }       \
```

```
 parent = RB_PARENT(elm, field);     \
 color = RB_COLOR(elm, field);     \
 if (child)       \
  RB_PARENT(child, field) = parent;   \
 if (parent) {       \
  if (RB_LEFT(parent, field) == elm)   \
   RB_LEFT(parent, field) = child;   \
  else       \
   RB_RIGHT(parent,
 field) = child;  \
  RB_AUGMENT(parent);     \
 } else       \
  RB_ROOT(head) = child;     \
color:        \
 if (color == RB_BLACK)      \
  name##_RB_REMOVE_COLOR(head, parent, child);  \
 return (old);       \
}        \
       \
/* Inserts a node into the RB tree */     \
attr struct type *       \
name##_RB_INSERT(struct name *head, struct type *elm)   \
{        \
 struct type *tmp;      \
 struct type *parent = NULL;     \
 int comp = 0;       \
 tmp = RB_ROOT(head);      \
 while (tmp) {       \
  parent = tmp;      \
  comp = (cmp)(elm, parent);    \
  if (comp < 0)      \
   tmp = RB_LEFT(tmp, field);   \
  else if (comp > 0)     \
   tmp = RB_RIGHT(tmp, field);   \
  else       \
   return (tmp);     \
 }       \
 RB_SET(elm, parent, field);     \
 if (parent != NULL) {      \
  if (comp < 0)      \
   RB_LEFT(parent, field) = elm;   \
  else       \
   RB_RIGHT(parent, field) = elm;   \
  RB_AUGMENT(parent);     \
 } else       \
  RB_ROOT(head) = elm;     \
 name##_RB_INSERT_COLOR(head,
```

```
 elm);    \
 return (NULL);       \
}         \
         \
/* Finds the node with the same key as elm */    \
attr struct type *       \
name##_RB_FIND(struct name *head, struct type *elm)   \
{         \
 struct type *tmp = RB_ROOT(head);    \
 int comp;       \
 while (tmp) {       \
  comp = cmp(elm, tmp);     \
  if (comp < 0)      \
   tmp = RB_LEFT(tmp, field);   \
  else if (comp > 0)     \
   tmp = RB_RIGHT(tmp, field);   \
  else       \
   return (tmp);     \
 }        \
 return (NULL);       \
}         \
         \
/* Finds the first node greater than or equal to the search key */ \
attr struct type *       \
name##_RB_NFIND(struct name *head, struct type *elm)   \
{         \
 struct type *tmp = RB_ROOT(head);    \
 struct type *res = NULL;     \
 int comp;       \
 while (tmp) {       \
  comp = cmp(elm, tmp);     \
  if (comp < 0) {      \
   res = tmp;     \
   tmp = RB_LEFT(tmp, field);   \
  }       \
  else if (comp > 0)     \
   tmp =
 RB_RIGHT(tmp, field);   \
  else       \
   return (tmp);     \
 }        \
 return (res);       \
}         \
         \
/* ARGSUSED */        \
attr struct type *       \
name##_RB_NEXT(struct type *elm)     \
{         \
```

```
 if (RB_RIGHT(elm, field)) {     \
  elm = RB_RIGHT(elm, field);    \
  while (RB_LEFT(elm, field))    \
   elm = RB_LEFT(elm, field);    \
 } else {       \
  if (RB_PARENT(elm, field) &&    \
      (elm == RB_LEFT(RB_PARENT(elm, field), field))) \
   elm = RB_PARENT(elm, field);   \
  else {       \
   while (RB_PARENT(elm, field) &&   \
       (elm == RB_RIGHT(RB_PARENT(elm, field), field)))\
    elm = RB_PARENT(elm, field);  \
   elm = RB_PARENT(elm, field);   \
  }       \
 }       \
 return (elm);       \
}        \
        \
/* ARGSUSED */       \
attr struct type *       \
name##_RB_PREV(struct type *elm)     \
{        \
 if (RB_LEFT(elm, field)) {     \
  elm = RB_LEFT(elm, field);    \
  while (RB_RIGHT(elm, field))    \
   elm = RB_RIGHT(elm, field);   \
 }
 else {       \
  if (RB_PARENT(elm, field) &&    \
      (elm == RB_RIGHT(RB_PARENT(elm, field), field))) \
   elm = RB_PARENT(elm, field);   \
  else {       \
   while (RB_PARENT(elm, field) &&   \
       (elm == RB_LEFT(RB_PARENT(elm, field), field)))\
    elm = RB_PARENT(elm, field);  \
   elm = RB_PARENT(elm, field);   \
  }       \
 }       \
 return (elm);       \
}        \
        \
attr struct type *       \
name##_RB_MINMAX(struct name *head, int val)    \
{        \
 struct type *tmp = RB_ROOT(head);    \
 struct type *parent = NULL;     \
 while (tmp) {       \
  parent = tmp;      \
```

```
 if (val < 0)      \
  tmp = RB_LEFT(tmp, field);   \
 else       \
  tmp = RB_RIGHT(tmp, field);   \
 }       \
 return (parent);      \
}

#define RB_NEGINF -1
#define RB_INF 1

#define RB_INSERT(name, x, y) name##_RB_INSERT(x, y)
#define RB_REMOVE(name, x, y) name##_RB_REMOVE(x, y)
#define RB_FIND(name, x, y) name##_RB_FIND(x, y)
#define RB_NFIND(name, x, y) name##_RB_NFIND(x,
 y)
#define RB_NEXT(name, x, y) name##_RB_NEXT(y)
#define RB_PREV(name, x, y) name##_RB_PREV(y)
#define RB_MIN(name, x)  name##_RB_MINMAX(x, RB_NEGINF)
#define RB_MAX(name, x)  name##_RB_MINMAX(x, RB_INF)

#define RB_FOREACH(x, name, head)     \
 for ((x) = RB_MIN(name, head);     \
      (x) != NULL;      \
      (x) = name##_RB_NEXT(x))

#define RB_FOREACH_FROM(x, name, y)     \
 for ((x) = (y);       \
     ((x) != NULL) && ((y) = name##_RB_NEXT(x), (x) != NULL); \
      (x) = (y))

#define RB_FOREACH_SAFE(x, name, head, y)    \
 for ((x) = RB_MIN(name, head);     \
     ((x) != NULL) && ((y) = name##_RB_NEXT(x), (x) != NULL); \
      (x) = (y))

#define RB_FOREACH_REVERSE(x, name, head)    \
 for ((x) = RB_MAX(name, head);     \
      (x) != NULL;      \
      (x) = name##_RB_PREV(x))

#define RB_FOREACH_REVERSE_FROM(x, name, y)    \
 for ((x) = (y);       \
     ((x) != NULL) && ((y) = name##_RB_PREV(x), (x) != NULL); \
      (x) = (y))

#define RB_FOREACH_REVERSE_SAFE(x, name,
```

```
 head, y)   \
 for ((x) = RB_MAX(name, head);     \
     ((x) != NULL) && ((y) = name##_RB_PREV(x), (x) != NULL); \
      (x) = (y))

#endif /* _SYS_TREE_H_ */
MIT
# Contributor: Wen Heping <wenhepingalpine@sohu.com>
# Maintainer: Wen Heping <wenhepingalpine@sohu.com>
pkgname=perl-software-license
pkgver=0.104007
pkgrel=0
# _pkgreal is used by apkbuild-cpan to find modules at MetaCpan
_pkgreal=Software-License
pkgdesc="packages that provide templated software licenses"
url="https://metacpan.org/release/Software-License/"
arch="noarch"
license="GPL-1.0-or-later OR Artistic-1.0-Perl"
depends="perl perl-data-section perl-text-template"
checkdepends="perl-try-tiny"
subpackages="$pkgname-doc"
source="https://cpan.metacpan.org/authors/id/L/LE/LEONT/Software-License-$pkgver.tar.gz"
builddir="$srcdir/$_pkgreal-$pkgver"

build() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 PERL_MM_USE_DEFAULT=1 perl -I. Makefile.PL \
  INSTALLDIRS=vendor \
  NO_PACKLIST=1 \
  NO_PERLLOCAL=1
 make
}

check() {
 export CFLAGS=$(perl -MConfig -E 'say $Config{ccflags}')
 make test
}

package() {
 make DESTDIR="$pkgdir" install
}

sha512sums="
12d75e9583b3013d9b4a282467f1ac80ab6b7f3251926d66591d01404489b528f22adc396dfd4528a0f0ca650f0eed6d
9c959e69eace2169c6ed1cfffe5277e4
  Software-License-0.104007.tar.gz
"
```

1.125 github.com/aws/aws-sdk-go-v2/internal/v4a 1.4.6

1.125.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata

```
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string
```

```
// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
//
This member is required.
ClientToken *string

// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
```

```
 Validity *types.DatetimeRange

 // Information about
 the license.
 LicenseMetadata []types.Metadata

 // Tags to add to the license. For more information about tagging support in
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
```

```
        with:
          path: sdkbase
          ref: ${{ github.base_ref }}
      - name: Checkout this ref
        uses: actions/checkout@v2
        with:
          path: new-ref
          fetch-depth: 0
      - name: Get Diff
        run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
      - name: Get Target Files
        run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
      - name: Checkout scancode
        uses: actions/checkout@v2
        with:
          repository: nexB/scancode-toolkit
          path: scancode-toolkit
          fetch-depth: 1
      - name: Set up Python ${{ matrix.python-version }}
         uses: actions/setup-python@v2
        with:
          python-version: ${{ matrix.python-version }}
      # ScanCode
      - name: Self-configure scancode
        working-directory: ./scancode-toolkit
        run: ./scancode --help
      - name: Run Scan code on target
        run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
      - name: Run Scan code on pr ref
        run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
      # compare
      - name: License test
        run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
```

setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger

spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution

RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
```

```
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
```

```
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
{
  "smithy": "2.0",
  "shapes": {
     "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
        "type": "structure",
        "members": {
           "message": {
              "target": "smithy.api#String"
           }
        },
        "traits": {
           "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
           "smithy.api#error": "client"
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
           "DirectoryId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
              "traits": {
                 "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
              }
```

```
            },
            "ActiveDirectorySettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
                }
            },
            "ActiveDirectoryType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
                    "smithy.api#length": {
                        "min": 1,
                        "max": 2
                    }
                }
            },
            "DomainCredentialsProvider": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
```

contains \n\t\t\tinformation about the credential provider for user administration. "
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": " The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory. "
            }
          }
        },
        "traits": {
          "smithy.api#documentation": " Contains network access and credential details that are needed for \n\t\t\tuser administration in the Active Directory. "
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
 {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n         <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
```

```
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                "smithy.api#required": {}
              }
            },
             "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
              }
            }
          },
          "traits": {

        "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
         }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

      {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                    "smithy.api#required": {}
                }
            },
            "LicenseServerSettings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/DeleteLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
              "smithy.api#required": {}
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
```

```
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummary": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}

      }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Directory": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
              }
            },
            "Domain": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
          "type": "structure",
          "members": {
            "InstanceUserSummary":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
              "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
          "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory domain.</p>",
                "smithy.api#length": {
                  "min": 1
                },

      "smithy.api#required": {}
              }
            }
          },
```

```
      "traits": {
        "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Attribute": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
          }
        },
        "Operation": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
          }
        },
        "Value": {
          "target": "smithy.api#String",
          "traits":
{
            "smithy.api#documentation": "<p>Value of the filter.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
      "type": "union",
      "members": {
        "ActiveDirectoryIdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
           "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
          }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
          "type": "structure",
          "members": {
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Settings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
                "smithy.api#required": {}
              }
            },
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
              }
            },
            "FailureMessage": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
```

```
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                  "smithy.api#required": {}
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },

      "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
               "traits": {
```

```
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance user.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
```

```
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
   "type": "structure",
   "members": {
      "message": {
         "target": "smithy.api#String"
      }
   },
   "traits": {
      "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
       "smithy.api#error": "server",
      "smithy.api#httpError": 500
   }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
   "type": "string",
   "traits": {
      "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
   "type": "list",
   "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
   "type": "service",
   "version": "2018-05-10",
   "operations": [
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
       },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
      },
      {
         "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
      },
      {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
```

```
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id",
                "content-length",

            "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
              ],
              "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
              ]
            },
            "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
            "smithy.api#title": "AWS License Manager User Subscriptions",
            "smithy.rules#endpointRuleSet": {
              "version": "1.0",
              "parameters": {
                "Region":
{
                  "builtIn": "AWS::Region",
                  "required": false,
                  "documentation": "The AWS region used to dispatch the request.",
                  "type": "String"
                },
                "UseDualStack": {
                  "builtIn": "AWS::UseDualStack",
                  "required": true,
                  "default": false,
                  "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                  "type": "Boolean"
                },
                "UseFIPS": {
                  "builtIn": "AWS::UseFIPS",
                  "required": true,
                  "default": false,
                  "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
```

```
      "type": "Boolean"
    },
    "Endpoint": {
      "builtIn": "SDK::Endpoint",
      "required": false,
      "documentation": "Override the endpoint used to send this request",
      "type": "String"
    }
  },
  "rules": [
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Endpoint"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseFIPS"
                },
                true
              ]
            }
          ],
          "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
          "type": "error"
        },
        {
          "conditions": [
            {

              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true
              ]
```

```
                }
              ],
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": {
                  "ref": "Endpoint"
                },

"properties": {},
                "headers": {}
              },
              "type": "endpoint"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Region"
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "aws.partition",

                  "argv": [
                    {
                      "ref": "Region"
                    }
                  ],
                  "assign": "PartitionResult"
                }
              ],
              "rules": [
                {
                  "conditions": [
```

```
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },

true
                  ]
                },
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {

"fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsFIPS"
                          ]
                        }
                      ]
                    },

                {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
```

```
                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                            ]
                        }

                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                    "ref": "UseFIPS"
                },
                true
            ]
        }
    ],
    "rules": [
        {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [

        {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

    "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"

}
              ],
              "type": "tree"
            },
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
```

```
                    },
                    true
                ]
            }
        ],
        "rules": [
            {

    "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            true,
                            {
                                "fn": "getAttr",
                                "argv": [
                                    {
                                        "ref": "PartitionResult"
                                    },
                                    "supportsDualStack"
                                ]

     }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

            ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
            }
        ],
        "type": "tree"
```

```
                    },
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                  "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }
                  ],
                  "type": "tree"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "error": "Invalid Configuration: Missing Region",
              "type": "error"
            }
          ]
        },
        "smithy.rules#endpointTests": {
          "testCases": [
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
              "expect":
{
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
                }
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": true
              }
            },
            {
              "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
              "expect": {
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
                }
              },
```

```
                "params": {
                  "Region": "us-east-1",

        "UseFIPS": true,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true
                }
              },
              {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                  "endpoint":
{
                    "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                  }
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": false
                }
              },
              {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                  "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                  }
                },
                "params": {
                  "Region": "cn-north-1",
                  "UseFIPS":
 true,
                  "UseDualStack": true
                }
```

```
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
         "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
```

```
      "expect": {
        "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
            "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack":
 false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error":
 "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
```

```
                    "expect": {
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": true,
                      "Endpoint": "https://example.com"
                    }
                  },
                  {
                    "documentation": "Missing region",
                    "expect": {
                      "error": "Invalid Configuration: Missing Region"
                    }
                  }
                ],
                "version": "1.0"
              }
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
            "type": "structure",
            "members": {
              "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
              },
              "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
                }
              },
              "Ipv4Address": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
                }
              }
            },
            "traits": {
```

```
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
               }
            },
            "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of license server.</p>"
               }
            },
            "ServerEndpoint": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
               }
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits":
{
                  "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
               }
            },
            "LicenseServerEndpointId": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
               }
            },
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
               }
            },
```

```
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
                }
            },
            "LicenseServers": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
                }
            },
            "CreationTime": {
                "target": "smithy.api#Timestamp",
                "traits": {
                    "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "PROVISIONING",
                    "value": "PROVISIONING",
                    "documentation": ""
                },
                {
                    "name": "PROVISIONING_FAILED",
```

```
            "value": "PROVISIONING_FAILED",
            "documentation": ""
          },
          {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "IdentityProviderSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
 {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
               }
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>Product</p>\n            </li>\n            <li>\n               <p>DirectoryId</p>\n
</li>\n         </ul>"
               }
```

```
            },
            "NextToken": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                  "smithy.api#required": {}
               }
            },
             "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "InstanceSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
              }
            },
            "NextToken":
```

```
{
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n <ul>\n <li>\n <p>Status</p>\n </li>\n <li>\n <p>InstanceId</p>\n </li>\n </ul>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
            "InstanceSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "LicenseServerEndpoints"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n              <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoints": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/ListProductSubscriptions"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
    "type": "structure",

    "members": {
        "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
            }
        },
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
        "smithy.api#http": {
            "method": "GET",
```

```
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

   },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListUserAssociations"
             },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "InstanceUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
         "type": "structure",
         "members": {
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
```

```
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

             "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

         "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ResourceArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
          "type": "structure",
          "members": {
            "SecretId": {
              "target": "smithy.api#String",

          "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
```

```
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
```

```
resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
           "traits": {
             "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
             "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "ProductUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
                }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
```

```
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{ResourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "Tags": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
         "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
```

```
            },
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
               }
            },
            "UpdateSettings":
 {
               "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
               "traits": {
                  "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n               <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
      <li>\n               <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n               <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n         </ul>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
 {
         "type": "structure",
         "members": {
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
      "type": "structure",
      "members": {
        "AddSubnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
            "smithy.api#required":
{}
          }
        },
        "RemoveSubnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A parameter is not valid.</p>",
        "smithy.api#error": "client"
      }
    }
  }
}
```

DeleteLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization

```
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
```

```
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
```

```
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
```

```
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
 != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options);
 err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
```

```
 Region:
      region,
 ServiceID:     ServiceID,
 OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType
```

```
// Unique, case-sensitive identifier that you provide to ensure the idempotency of
// the request.
//
// This member is required.
ClientToken *string

// License entitlements.
//
// This member is required.
Entitlements []types.EntitlementData

// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string
```

```
// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
```

```
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
```

```
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go

Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData
```

```
// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
```

```
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
```

```
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack,
options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}
```

```
func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
```

```
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
```

```
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
```

```
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
```

InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER

```
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
```

```
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
```

```
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
```

```
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
```

```
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
```

InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/DeregisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
```

```
            },
            "Operator": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
               "traits": {
                  "smithy.api#documentation": "<p>An operator for filtering results.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
         "type":
 "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
         },
         "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
            "smithy.api#http": {
               "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
```

```
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",
```

```
   "traits": {
                    "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
                }
            },
            "ProductCode": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
               "traits": {
                  "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
               }
            },
            "LastUpdatedTime": {
               "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
               }
            },
            "SubscriptionName": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
               }
            },
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
```

```
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
         "type": "structure",
         "members": {
            "message": {
               "target": "smithy.api#String"
            }
         },
         "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
         "type": "service",
         "version": "2018-05-10",
         "operations": [
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
     },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
       "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
```

```
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
 configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
```

```
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }

        ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]

}
                    ],
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                    "type": "error"
                  },
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": {
                        "ref": "Endpoint"
```

```
                    },
                    "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"

    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
```

```
                "ref": "UseFIPS"
                    },
                    true
                ]
                },
                {
                "fn": "booleanEquals",
                "argv": [
                    {
                    "ref": "UseDualStack"
                    },
                    true
                ]
                }

],
            "rules": [
                {
                "conditions": [
                    {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                        "fn": "getAttr",
                        "argv": [
                            {
                            "ref": "PartitionResult"

},
                            "supportsFIPS"
                        ]
                        }
                    ]
                    },
                    {
                    "fn": "booleanEquals",
                    "argv": [
                        true,
                        {
                        "fn": "getAttr",
                        "argv": [

                        {
                            "ref": "PartitionResult"
                        },
                        "supportsDualStack"
```

```
                                        ]
                                    }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],

    "rules": [
                                    {
                                        "conditions": [],
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {

        "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {

                "fn": "booleanEquals",
                        "argv": [
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          },
                          true

                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "rules": [
                        {
                          "conditions": [],
                          "endpoint": {
                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

  "properties": {},
                            "headers": {}
                          },
                          "type": "endpoint"
                        }
                      ],
                      "type": "tree"
                    }
                  ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "FIPS is enabled
but this partition does not support FIPS",
                  "type": "error"
```

```
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true

    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [
                                        {

                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

{
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
```

```
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                    }
                                ],
                                "type": "tree"
                            },
                            {
                                "conditions": [],
                                "error": "DualStack is enabled but this partition does not support DualStack",
                                "type": "error"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
],
"type": "tree"
```

```
      }
    ]
  },
  "smithy.rules#endpointTests": {
    "testCases": [
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

    }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {

     "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-east-1",
          "UseFIPS": false,
          "UseDualStack": true
        }
      },
      {
        "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
```

```
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
              }

        },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
             },
            "params": {
```

```
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
            }
        },
        "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

     },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
```

```
        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips enabled and dualstack disabled",
            "expect": {
              "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
            },
            "params": {

        "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "For custom endpoint with fips disabled and dualstack enabled",
            "expect": {
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true,
              "Endpoint": "https://example.com"
            }
          },
          {
            "documentation": "Missing region",

          "expect": {
              "error": "Invalid Configuration: Missing Region"
            }
          }
        ],
        "version": "1.0"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
          <li>\n              <p>\n                <code>DualSubscription</code>\n              </p>\n            </li>\n
```

\n \n <code>InstanceID</code>\n \n \n \n \n <code>InstanceType</code>\n \n \n \n \n <code>ProductCode</code>\n \n \n \n \n <code>Region</code>\n \n \n \n \n <code>Status</code>\n \n \n \n \n <code>UsageOperation</code>\n \n \n \n For each filter, you can use one of the following <code>Operator</code> values to \n \t\tdefine the behavior of the filter: \n \n \n \n <code>contains</code>\n \n \n \n \n <code>equals</code>\n \n \n \n \n <code>Notequal</code>\n \n \n "
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": " The maximum items to return in a request. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response. ",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": " An array that contains instance objects. "
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The next token used for paginated responses. When this \n\tfield

isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional
objects. "
}
}
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
"type": "operation",
"input": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
},
"output": {
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
},
"errors": [
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
},
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
},
{
"target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
}
],
"traits": {
"smithy.api#documentation":
" Lists the Linux subscriptions that have been discovered. If you have linked your\n organization, the returned results will include data aggregated across your accounts in\n Organizations. ",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/subscription/ListLinuxSubscriptions"
},
"smithy.api#idempotent": {},
"smithy.api#paginated": {
"inputToken": "NextToken",
"outputToken": "NextToken",
"pageSize": "MaxResults",
"items": "Subscriptions"
}
}
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
"type": "structure",
"members": {
"Filters": {

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

          "traits": {
              "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n       <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
        "type": "structure",
        "members": {
          "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
```

```
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

   "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>"
            }
          }
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria \n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
```

```
the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
```

```
        }
      }
    },
    "traits": {
      "smithy.api#input": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
    "type": "structure",
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
```

```
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },

       {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
        "smithy.api#http": {
          "code": 200,
```

```
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
              "smithy.api#required": {}
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {

              "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License
Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret
that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is
the offline token.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider
access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions,
```

\n\t\t\tthis is the status of the offline token. "
            }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status. "
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {

              "smithy.api#documentation": " The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider. "
            }
          }
        },
        "traits": {
          "smithy.api#documentation": " A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider. "
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": " Unable to find the requested Amazon Web Services resource. ",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-

```
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "InProgress",
              "value": "InProgress",
              "documentation": "InProgress status"
            },
            {
              "name": "Completed",
              "value": "Completed",
              "documentation": "Completed status"
            },
            {
              "name": "Successful",
              "value": "Successful",
              "documentation": "Successful status"
            },
            {
              "name": "Failed",
              "value": "Failed",
              "documentation": "Failed status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#length": {
              "min": 1,
              "max": 100
            }
          }
        },
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          },
          "smithy.api#uniqueItems": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

     "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
```

```
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "ACTIVE",
              "value": "ACTIVE",
              "documentation": "ACTIVE status"
            },
            {
              "name": "INVALID",
              "value": "INVALID",
              "documentation": "INVALID status"
            },
            {
              "name": "PENDING",
              "value": "PENDING",
              "documentation": "PENDING status"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
```

```
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to which to add the specified \n\t\t\tmetadata tags.</p>",
               "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tags": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource. Tags are \n\t\t\tformatted as key value pairs.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
```

```
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web Services resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
```

```
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input":
{}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                    "smithy.api#required":
{}
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                    "smithy.api#required": {}
                }
            },
            "AllowUpdate": {
                "target": "smithy.api#Boolean",
                "traits": {
                    "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
```

```
from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
             }
          }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
          "type": "structure",
          "members": {
              "message": {
                  "target": "smithy.api#String"
              }
          },
          "traits": {
              "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
              "smithy.api#error": "client"
          }
      }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or

agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning

Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.126 gobject-introspection 1.82.0-r2

1.126.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed
to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it

if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute
and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work
which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered

independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based
on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial distribution and only if you
received the program in object code or
executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary

form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy
the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each
time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free
redistribution of the Program by
all those who receive copies directly or indirectly through you, then

the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through
any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number
of this License which applies to it and "any
later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free

Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN
IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License,

or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show
w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.

GNU LIBRARY GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1991 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the library GPL. It is
numbered 2 because it goes with version 2 of the ordinary GPL.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Library General Public License, applies to some
specially designated Free Software Foundation software, and to any
other libraries whose authors decide to use it. You can use it for
your libraries, too.

When we speak of free software, we are referring to freedom,
not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if
you distribute copies of the library, or if you modify it.

For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the recipients all the rights that we gave
you. You must make sure that they, too, receive or can get the source
code. If you link a program with the library, you must provide
complete object files to the recipients so that they can relink them
with the library, after making
changes to the library and recompiling
it. And you must show them these terms so they know their rights.

Our method of protecting your rights has two steps: (1) copyright
the library, and (2) offer you this license which gives you legal
permission to copy, distribute and/or modify the library.

Also, for each distributor's protection, we want to make certain
that everyone understands that there is no warranty for this free
library. If the library is modified by someone else and passed on, we

want its recipients to know that what they have is not the original version, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license.

The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The

former contains code derived from the library, while the latter only
works together with the library.

Note that it is possible for a library to be covered by the ordinary
General Public License rather than by this special one.

GNU LIBRARY GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library which
contains a notice placed by the copyright holder or other authorized
party saying it may be distributed under the terms of this Library
General Public License (also called "this License"). Each licensee is
addressed as "you".

A "library" means a collection of software functions and/or data
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work
which has been distributed
under these terms. A "work based on the
Library" means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or translated
straightforwardly into another language. (Hereinafter, translation is
included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for
making modifications to it. For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control compilation
and installation of the library.

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent
of the use of the Library in a tool for
writing it). Whether that is true depends on what the Library does
and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any

warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition,
mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library. To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License. (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.) Do not make any other change in
these notices.

Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code
of
the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library". Such a
work, in isolation, is not a derivative
work of the Library, and
therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the

user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

d) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the

Library, and explaining
where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for
copying, distributing or modifying
the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute
the Library at all. For example, if a patent
license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any

patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system;
it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Library General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each
version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY

IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR
LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year>
<name of author>

This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Library General Public
License as published by the Free Software Foundation; either
version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of

MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Library General Public License for more details.

You should have received a copy of the GNU Library General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here
is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
gobject-introspection has two licenses; one for the typelib library,
and one for the tools.

* The typelib libraries (girepository/) are licensed under the LGPLv2+.
See the file COPYING.LGPL.

* The remaining code is GPLv2+ compatible (see the file COPYING.GPL) and
consists of a mix of GPLv2+, LGPLv2+ and MIT. See the license headers in
each file for details.

In general where applicable files should have headers denoting their license
status; if they do not, please file a bug at
https://gitlab.gnome.org/GNOME/gobject-introspection/issues.

1.127 github.com/aws/aws-sdk-go-v2/aws/protocol/eventstream 1.7.1

1.127.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger

OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
name: License Scan

on: [pull_request]

```
jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
     # compare
     - name: License test
       run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
```

```
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
```

```
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
```

```
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
```

```
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
```

```
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
```

```
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
```

Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent

AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step

ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
          "DirectoryId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
            "traits": {
              "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
            }
          },
          "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
```

```
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
```

```
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based
subscriptions.</p>\n        <note>\n          <p>Your estimated bill for charges on the number of users and related
costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing
status) in Amazon Web Services Billing. For more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http":
{
            "code": 200,
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
            }
        },
        "traits": {

    "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
```

```
      "type": "structure",
      "members": {
        "InstanceUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
         }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

       {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
             },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/DeleteLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "LicenseServerEndpointArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
              "smithy.api#required": {}
            }
          },
           "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
         "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
 {
         "type": "structure",
         "members": {
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
               }
            },
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
```

```
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
```

```
domain.</p>",
                    "smithy.api#length": {
                       "min": 1
                    },

    "smithy.api#required": {}
                }
             }
          },
          "traits": {
             "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
          }
       },
       "com.amazonaws.licensemanagerusersubscriptions#Filter": {
          "type": "structure",
          "members": {
             "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                   "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
             },
             "Operation": {
                "target": "smithy.api#String",
                "traits": {
                   "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
             },
             "Value": {
                "target": "smithy.api#String",
                "traits":
{
                   "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
             }
          },
          "traits": {
             "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
          }
       },
       "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
          "type": "list",
          "member": {
             "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
          }
       },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
      "type": "union",
      "members": {
        "ActiveDirectoryIdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
      "type": "structure",
      "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
            "smithy.api#required": {}
          }
        },
        "Settings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
            "smithy.api#required": {}
          }
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
            "smithy.api#required": {}
```

```
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
          },
          "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
    "type": "structure",
    "members": {
        "Username": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
            }
        },
        "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
            }
        },

"IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
          },
          "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
```

```
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
           "smithy.api#error": "server",
          "smithy.api#httpError": 500
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
          },
          {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
```

```
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",

      "x-api-key",
            "authorization",
            "x-amz-date",
            "x-amz-security-token",
            "Access-Control-Allow-Headers",
            "Access-Control-Allow-Methods",
            "Access-Control-Allow-Origin"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region":
{
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
```

```
            "type": "Boolean"
        },
        "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will
return an error.",
            "type": "Boolean"
        },
        "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
        }
    },
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Endpoint"
                        }
                    ]
                }
             ],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                    "type": "error"
                },
                {
                    "conditions": [
```

```
                {

                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": {
                  "ref": "Endpoint"
                },

"properties": {},
                  "headers": {}
              },
              "type": "endpoint"
            }
          ],
          "type": "tree"
        },
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Region"
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "aws.partition",

                  "argv": [
                    {
```

```
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

true

```
                        ]
                      },
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseDualStack"
                          },
                          true
                        ]
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
```

"fn": "booleanEquals",

```
                            "argv": [
                              true,
                              {
                                "fn": "getAttr",
                                "argv": [
                                  {
                                    "ref": "PartitionResult"
                                  },
                                  "supportsFIPS"
                                ]
                              }
                            ]
                          },
```

```
                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }

                ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }

    ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
```

```
{
                                    "ref": "UseFIPS"
                                },
                                true
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {
                                            "fn": "getAttr",
                                            "argv": [

                                {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsFIPS"
                                        ]
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {

                        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

    }
                    ],
```

```
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

         }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "endpoint": {
                                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                "properties": {},
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
```

```
                ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "DualStack is enabled but this partition does not support DualStack",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

            "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
            }
        ],
        "type": "tree"
      }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
```

```
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",

      "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS":
true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint":
{
                "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
```

```
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
```

```
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
```

```
                {
                  "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
                    }
                  },
                  "params": {
                    "Region": "us-isob-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack":
 false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://example.com"
                    }
                  },
                  "params": {
                    "UseFIPS": false,
                    "UseDualStack": false,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "For custom endpoint with fips enabled and dualstack disabled",
                  "expect": {
                    "error":
```

```
"Invalid Configuration: FIPS and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },
                  {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": true,
                      "Endpoint": "https://example.com"
                     }
                  },
                  {
                    "documentation": "Missing region",
                    "expect": {
                      "error": "Invalid Configuration: Missing Region"
                    }
                  }
                ],
                "version": "1.0"
              }
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
            "type": "structure",
            "members": {
              "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
              },
              "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
```

```
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
    "type": "string"
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
    }
},
```

```
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
    "traits": {
      "smithy.api#enum": [
         {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
         },
         {
```

```
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n<ul>\n<li>\n<p>Product</p>\n</li>\n<li>\n<p>DirectoryId</p>\n</li>\n</ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/instance/ListInstances"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
```

```
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>IdentityProviderArn</p>\n            </li>\n        </ul>"
              }
            },
            "NextToken": {
               "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoints": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
              }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "ProductUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
              }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
```

```
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
         },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceUserSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
```

```
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
```

```
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

           "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                "smithy.api#required": {}
            }
        },
        "ProductUserArn": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
        },
        "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                "smithy.api#required": {}
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
              }
            ],
            "traits": {
              "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
              "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
              },
              "smithy.api#idempotent": {}
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
            "type": "structure",
            "members": {
              "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                  "smithy.api#required": {}
                }
              },

           "Product": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                  "smithy.api#required": {}
                }
              },
              "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                  "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
              },
              "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
              }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",
```

```
        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

         "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
                }
              }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#documentation":
"<p>Contains settings for a specific server.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "RDS_SAL",
                    "value": "RDS_SAL",
                    "documentation": ""
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },
                    "smithy.api#required": {}
                }
            },
            "SecurityGroupId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
                "traits": {
```

```
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                "smithy.api#required": {}
              }
            }
          },

          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

             "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
```

provider. \n <note>\n
Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as Pending billing status) in Amazon Web Services Billing. For more information, see Viewing your\n\t\t\t\tmonthly charges in the Amazon Web Services Billing User Guide. \n </note>",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/user/StartProductSubscription"
}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
"type": "structure",
"members": {
"Username": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The user name
from the identity provider of the user. ",
"smithy.api#required": {}
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " An object that specifies details for the identity provider. ",
"smithy.api#required": {}
}
},
"Product": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The name of the user-based subscription product. \n
Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}
}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user for whom to start the product \n\t\t\tsubscription. "
}

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
          "smithy.api#http":
 {
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n          </p>"
            }
          },
          "ProductUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
```

```
    "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    },
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 50
      },
      "smithy.api#sensitive": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
     },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
      "smithy.api#http": {
        "method": "PUT",
        "uri": "/tags/{ResourceArn}"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
```

```
        "type": "structure",
          "members": {
            "ResourceArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Tags": {
          "type": "map",
          "key": {
            "target": "smithy.api#String"
          },
          "value": {
            "target": "smithy.api#String"
          },
          "traits": {
            "smithy.api#length": {
              "min": 0,
              "max": 50
            },
            "smithy.api#sensitive": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
```

```
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
```

```
            },
            "TagKeys": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                   "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
 {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
```

```
            "type": "structure",
            "members": {
                "message": {
                    "target": "smithy.api#String"
                }
            },
            "traits": {
                "smithy.api#documentation": "<p>A parameter is not valid.</p>",
                "smithy.api#error": "client"
            }
        }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
```

```
//   - ProductSKU
//
//   - Status
//
//
  - Fingerprint
//
//   - IssuerName
//
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
```

```
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string
```

```
 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
```

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
```

```
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData
```

```
// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
```

```
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string
```

```
 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {
```

```
// Date when the license is deleted.
DeletionDate *string

// License status.
Status types.LicenseDeletionStatus

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
```

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
```

```
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
```

RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider
resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                 }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
```

```
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

           "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
          }
        },
        "StatusMessage": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
          "traits": {
            "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
          }
        },
        "HomeRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
        },
        "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
        },
        "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
        },
        "RegisteredWithSubscriptionProvider": {
```

```
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
      "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
        "x-amzn-trace-id"
      ],
      "additionalExposedHeaders": [
        "x-amzn-errortype",
        "x-amzn-requestid",
        "x-amzn-trace-id"
      ]
    },
    "smithy.api#documentation": "<p>With License Manager,
```

```
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
              "rules": [
                {
```

```
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }

            ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
```

```
    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {

                                    "ref": "UseFIPS"
                                        },
                                        true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
```

```
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }

  ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"

              },
                                "supportsFIPS"
                              ]
                            }
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [

                               {
                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                              ]
                            }
                          ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
```

```
      "rules": [
                                        {
                                          "conditions": [],
                                          "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                          },
                                          "type": "endpoint"
                                        }
                                      ],

                            "type": "tree"
                                    }
                                  ],
                                  "type": "tree"
                                },
                                {
                                  "conditions": [],
                                  "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                                  "type": "error"
                                }
                              ],
                              "type": "tree"
                            },
                            {

          "conditions": [
                                {
                                  "fn": "booleanEquals",
                                  "argv": [
                                    {
                                      "ref": "UseFIPS"
                                    },
                                    true
                                  ]
                                }
                              ],
                              "rules": [
                                {
                                  "conditions": [
                                    {

                        "fn": "booleanEquals",
                                        "argv": [
                                          {
```

```
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled
 but this partition does not support FIPS",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
```

```
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true

                            ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [
                                        {
                                            "fn": "booleanEquals",
                                            "argv": [
                                                true,
                                                {
                                                    "fn": "getAttr",
                                                    "argv": [
                                                        {

                                                        "ref": "PartitionResult"
                                                        },
                                                        "supportsDualStack"
                                                    ]
                                                }
                                            ]
                                        }
                                    ],
                                    "rules": [
                                        {
                                            "conditions": [],
                                            "rules": [

        {
                                                    "conditions": [],
                                                    "endpoint": {
                                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                        "properties": {},
                                                        "headers": {}
                                                    },
                                                    "type": "endpoint"
                                                }
                                            ],
                                            "type": "tree"

                                }
                                    ],
```

```
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {

         "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
              }

    },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
           },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
              }

           },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": false,
              "UseDualStack": true
```

```
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

  "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
              }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
```

```
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
```

```
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
```

```
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Instances"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n          <ul>\n            <li>\n              <p>\n                <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n              <p>\n                <code>AmiID</code>\n              </p>\n            </li>\n
          <li>\n              <p>\n                <code>DualSubscription</code>\n              </p>\n            </li>\n
 <li>\n              <p>\n                <code>InstanceID</code>\n              </p>\n            </li>\n            <li>\n
  <p>\n                <code>InstanceType</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
    <code>ProductCode</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>Region</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>Status</code>\n              </p>\n            </li>\n            <li>\n              <p>\n
 <code>UsageOperation</code>\n              </p>\n            </li>\n          </ul>\n          <p>For each filter, you can use
 one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n          <ul>\n
    <li>\n              <p>\n                <code>contains</code>\n              </p>\n            </li>\n            <li>\n
 <p>\n                <code>equals</code>\n              </p>\n            </li>\n            <li>\n
```

```
<p>\n <code>Notequal</code>\n </p>\n </li>\n </ul>"
        }
      },
      "MaxResults": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
        "traits": {
          "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
          "smithy.api#length": {
            "min": 1,
            "max": 16384
          }
        }
      }
    },
    "traits": {
      "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
    "type": "structure",
    "members": {
      "Instances": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
        "traits": {
          "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
        }
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
    "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n         <p>The valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n
```

```
<code>contains</code>\n </p>\n </li>\n <li>\n <p>\n
<code>equals</code>\n </p>\n </li>\n <li>\n <p>\n
<code>Notequal</code>\n </p>\n </li>\n </ul>"
        }
      },
      "MaxResults": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
        "traits": {
          "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
          "smithy.api#length": {
            "min": 1,
            "max": 16384
          }
        }
      }
    },
    "traits": {
      "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
    "type": "structure",
    "members": {
      "Subscriptions": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
        "traits": {
          "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

        }
      }
    }
  },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "RegisteredSubscriptionProviders"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSources": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

  "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
          }
```

```
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
            "smithy.api#range": {
              "min": 1,
              "max": 100
            }
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
          }
        }
      },

      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}

                 }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
```

```
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {
```

```
    "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },

         {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
```

```
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
           "traits": {
             "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
             "smithy.api#required": {}
           }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
             "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've
stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat
Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
             "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {

           "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
             "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
          }
        },
        "SubscriptionProviderArn": {
          "target": "smithy.api#String",
          "traits": {
             "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
```

```
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
              }
            },
            "SubscriptionProviderStatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
              }
```

```
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-\\.]{0,63}:secret:[^/]{1,1023}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "InProgress",
```

```
            "value": "InProgress",
            "documentation": "InProgress status"
          },
          {
            "name": "Completed",
            "value": "Completed",
            "documentation": "Completed status"
          },
          {
            "name": "Successful",
            "value": "Successful",
            "documentation": "Successful status"
          },
          {
            "name": "Failed",
            "value": "Failed",
            "documentation": "Failed status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

     "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
"list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
```

```
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
        "type": "map",
        "key":
{
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

   "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tagKeys": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
```

```
        "traits": {
            "smithy.api#input":
{}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
```

```
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
            }
        },
        "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
            }
        },
        "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
        }

    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
    "type": "structure",
    "members": {
      "LinuxSubscriptionsDiscovery": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
        "traits": {
          "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
        }
      },
      "LinuxSubscriptionsDiscoverySettings": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
        "traits": {
          "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
        }

  },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
```

```
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all

other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.128 alpine-baselayout 3.6.8-r1

1.128.1 Available under license :

Note that many files in here are not copyrighted/licensed, so they are
actually in the public domain.

Otherwise:
Copyright 1996-2013 Gentoo Foundation

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Library General Public License
instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of

running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you

distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program)
on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial distribution and only if you
received the program in object code or executable form with such
an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
access to copy from a designated place,
then offering equivalent
access to copy the source code from the same place counts as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License. Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

5. You are not required to accept this License, since you have not
signed it. However, nothing else grants you permission to modify or
distribute the Program or its derivative works. These actions are
prohibited by law if you do not accept this License. Therefore, by
modifying or distributing the Program (or any work based on the
Program),
you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions. You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License
and any other pertinent obligations, then as a consequence you
may not distribute the Program at all. For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under

any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through
that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present
version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software

generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you
can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,

but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type
`show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit
linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

1.129 libncursesw 6.5_p20241006-r3

1.129.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
# ncurses 6.5 - patch 20241006 - Thomas E. Dickey
#
# -----------------------------------------------------------------------------
#
# Ncurses 6.5 is at
#   https://invisible-island.net/archives/ncurses/
#   https://invisible-mirror.net/archives/ncurses/
#   https://ftp.gnu.org/gnu/ncurses/
#
# Patches for ncurses 6.5 can be found at
#   https://invisible-island.net/archives/ncurses/6.5
#   https://invisible-mirror.net/archives/ncurses/6.5
#
# -----------------------------------------------------------------------------
# https://invisible-island.net/archives/ncurses/6.5/ncurses-6.5-20241006.patch.gz
# patch by Thomas E. Dickey <dickey@invisible-island.net>
# created  Sun Oct  6 23:44:01 UTC 2024
# -----------------------------------------------------------------------------
# NEWS                          |    6 +++
# VERSION                       |    2 -
# c++/cursesf.cc                |    6 +--
# c++/cursesf.h
                |    6 +--
# c++/cursesm.cc                |    6 +--
# c++/cursesm.h                 |    6 +--
# c++/cursesp.cc                |    6 +--
# c++/cursespad.cc              |    6 +--
# c++/cursslk.cc                |   12 +++++----
# c++/cursslk.h                 |    6 +--
# dist.mk                       |    4 +-
# misc/terminfo.src             |   23 ++++++++++--
# ncurses/base/lib_screen.c     |    4 +-
# ncurses/base/new_pair.c       |    4 +-
# ncurses/curses.priv.h         |    4 +-
# ncurses/new_pair.h            |    4 +-
# ncurses/tinfo/trim_sgr0.c     |    7 ++--
# ncurses/tty/lib_twait.c       |    6 +--
# package/debian-mingw/changelog   |    4 +-
# package/debian-mingw64/changelog |    4 +-
# package/debian/changelog      |    4 +-
# package/mingw-ncurses.nsi     |    4 +-
# package/mingw-ncurses.spec    |    2 -
# package/ncurses.spec          |    2 -
# package/ncursest.spec         |
```

2 -
test/blue.c | 10 +++---
test/bs.c | 8 ++--
test/cardfile.c | 12 +++----
test/chgat.c | 6 +--
test/clip_printw.c | 8 ++--
test/color_name.h | 6 +--
test/demo_defkey.c | 4 +-
test/demo_forms.c | 22 ++++++-------
test/demo_menus.c | 32 ++++++++++---------
test/demo_new_pair.c | 4 +-
test/demo_panels.c | 16 ++++-----
test/demo_termcap.c | 18 +++++-----
test/demo_terminfo.c | 18 +++++-----
test/dots.c | 6 +--
test/dots_mvcur.c | 6 +--
test/dots_termcap.c | 8 ++--
test/dup_field.c | 14 ++++----
test/filter.c | 6 +--
test/form_driver_w.c | 6 +--
test/gdc.c | 10 +++---
test/inch_wide.c
| 6 +--
test/inchs.c | 6 +--
test/ins_wide.c | 6 +--
test/insdelln.c | 8 ++--
test/inserts.c | 6 +--
test/knight.c | 7 ++--
test/list_keys.c | 8 ++--
test/move_field.c | 18 +++++-----
test/movewindow.c | 16 ++++-----
test/ncurses.c | 61 ++++++++++++++++++++++------------------
test/padview.c | 12 +++----
test/parse_rgb.h | 6 +--
test/picsmap.c | 14 ++++----
test/popup_msg.c | 8 ++--
test/popup_msg.h | 6 +--
test/railroad.c | 6 +--
test/rain.c | 20 ++++++------
test/redraw.c | 6 +--
test/savescreen.c | 14 ++++----
test/tclock.c | 4 +-
test/test.priv.h
| 10 +++---
test/test_add_wchstr.c | 6 +--
test/test_addchstr.c | 6 +--
test/test_addstr.c | 6 +--
test/test_addwstr.c | 6 +--

```
# test/test_endwin.c             |   6 +--
# test/test_get_wstr.c           |   8 ++--
# test/test_getstr.c             |   8 ++--
# test/test_instr.c              |   8 ++--
# test/test_inwstr.c             |   8 ++--
# test/test_mouse.c              |   4 +-
# test/test_opaque.c             |   8 ++--
# test/test_sgr.c                |  26 +++++++--------
# test/test_tparm.c              |  12 +++++----
# test/test_vidputs.c            |   6 +--
# test/testcurs.c                |   8 ++--
# test/testscanw.c               |   6 +--
# test/view.c                    |  21 +++++-------
# 83 files changed, 392 insertions(+), 369 deletions(-)
# ------------------------------------------------------------------------------
Index: NEWS
Prereq:
  1.4185
--- ncurses-6.5-20240928+/NEWS 2024-09-28 20:27:44.000000000 +0000
+++ ncurses-6.5-20241006/NEWS 2024-10-06 08:53:45.000000000 +0000
@@ -26,7 +26,7 @@
-- sale, use or other dealings in this Software without prior written        --
-- authorization.                                                            --
--------------------------------------------------------------------------------
--- $Id: NEWS,v 1.4185 2024/09/28 20:27:44 tom Exp $
+-- $Id: NEWS,v 1.4188 2024/10/06 08:53:45 tom Exp $
--------------------------------------------------------------------------------

This is a log of changes that ncurses has gone through since Zeyd started
@@ -46,6 +46,10 @@
Changes through 1.9.9e did not credit all contributions;
it is not possible to add this information.

+20241006
+ + fixes for compiler warnings/cppcheck.
+ + use xterm+alt+title in wezterm -TD
+
20240928
  + improve error-message from infocmp when a terminal entry cannot be
    opened (patch by Branden Robinson).
Index:
 VERSION
--- ncurses-6.5-20240928+/VERSION 2024-09-28 09:53:21.000000000 +0000
+++ ncurses-6.5-20241006/VERSION 2024-10-06 08:53:45.000000000 +0000
@@ -1 +1 @@
-5:0:10 6.5 20240928
+5:0:10 6.5 20241006
Index: c++/cursesf.cc
```

```
Prereq:  1.26
--- ncurses-6.5-20240928+/c++/cursesf.cc 2021-04-17 18:11:08.000000000 +0000
+++ ncurses-6.5-20241006/c++/cursesf.cc 2024-10-05 22:47:12.000000000 +0000
@@ -1,6 +1,6 @@
// * this is for making emacs happy: -*-Mode: C++;-*-
/****************************************************************************
- * Copyright 2019-2020,2021 Thomas E. Dickey                                *
+ * Copyright 2019-2021,2024 Thomas E. Dickey                                *
 * Copyright 1998-2005,2011 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -36,7 +36,7 @@
#include "cursesf.h"
#include "cursesapp.h"

-MODULE_ID("$Id: cursesf.cc,v 1.26 2021/04/17 18:11:08 tom Exp $")
+MODULE_ID("$Id: cursesf.cc,v 1.27 2024/10/05 22:47:12 tom Exp $")

NCursesFormField::~NCursesFormField () THROWS(NCursesException)
{
@@ -76,7 +76,7 @@

void NCursesForm::setDefaultAttributes()
{
-  NCursesApplication* S = NCursesApplication::getApplication();
+  const NCursesApplication* S = NCursesApplication::getApplication();

  int n = count();
  if (n > 0) {
Index: c++/cursesf.h
Prereq:  1.39
--- ncurses-6.5-20240928+/c++/cursesf.h 2022-08-20 20:52:15.000000000 +0000
+++ ncurses-6.5-20241006/c++/cursesf.h 2024-10-05 22:47:12.000000000 +0000
@@ -1,7 +1,7 @@
// * This makes emacs happy -*-Mode: C++;-*-
// vile:cppmode
/****************************************************************************
- * Copyright 2019-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 1998-2012,2014 Free Software
 Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -33,7 +33,7 @@
 *   Author: Juergen Pfeifer, 1997                                          *
 ****************************************************************************/

-// $Id: cursesf.h,v 1.39 2022/08/20 20:52:15 tom Exp $
```

```
+// $Id: cursesf.h,v 1.40 2024/10/05 22:47:12 tom Exp $

#ifndef NCURSES_CURSESF_H_incl
#define NCURSES_CURSESF_H_incl 1
@@ -384,7 +384,7 @@
  }

  inline void *get_user() {
-    UserHook* uptr = reinterpret_cast<UserHook*>(::form_userptr (form));
+    const UserHook* uptr = reinterpret_cast<UserHook*>(::form_userptr (form));
    assert (uptr != 0 && uptr->m_back==this && uptr->m_owner==form);
    return uptr->m_user;
  }
Index: c++/cursesm.cc
Prereq:  1.27
--- ncurses-6.5-20240928+/c++/cursesm.cc 2021-04-17 18:11:08.000000000 +0000
+++ ncurses-6.5-20241006/c++/cursesm.cc 2024-10-05
 22:47:12.000000000 +0000
@@ -1,6 +1,6 @@
// * this is for making emacs happy: -*-Mode: C++;-*-
/****************************************************************************
- * Copyright 2019-2020,2021 Thomas E. Dickey                                *
+ * Copyright 2019-2021,2024 Thomas E. Dickey                                *
 * Copyright 1998-2011,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -36,7 +36,7 @@
#include "cursesm.h"
#include "cursesapp.h"

-MODULE_ID("$Id: cursesm.cc,v 1.27 2021/04/17 18:11:08 tom Exp $")
+MODULE_ID("$Id: cursesm.cc,v 1.28 2024/10/05 22:47:12 tom Exp $")

NCursesMenuItem::~NCursesMenuItem() THROWS(NCursesException)
{
@@ -168,7 +168,7 @@
void
NCursesMenu::setDefaultAttributes()
{
-  NCursesApplication* S = NCursesApplication::getApplication();
+
  const NCursesApplication* S = NCursesApplication::getApplication();
  if (S) {
    ::set_menu_fore(menu, S->foregrounds());
    ::set_menu_back(menu, S->backgrounds());
Index: c++/cursesm.h
Prereq:  1.35
--- ncurses-6.5-20240928+/c++/cursesm.h 2022-08-20 20:52:15.000000000 +0000
```

```
+++ ncurses-6.5-20241006/c++/cursesm.h 2024-10-05 22:47:12.000000000 +0000
@@ -1,6 +1,6 @@
// * This makes emacs happy -*-Mode: C++;-*-
/****************************************************************************
- * Copyright 2019-2020,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 1998-2012,2014 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -32,7 +32,7 @@
 *   Author: Juergen Pfeifer, 1997                                          *
 ****************************************************************************/

-// $Id: cursesm.h,v 1.35 2022/08/20 20:52:15 tom Exp $
+// $Id: cursesm.h,v 1.36 2024/10/05 22:47:12 tom Exp $

#ifndef NCURSES_CURSESM_H_incl
#define NCURSES_CURSESM_H_incl 1
@@ -245,7 +245,7 @@
  }

  inline void *get_user() {
-    UserHook* uptr = STATIC_CAST(UserHook*)(::menu_userptr (menu));
+    const UserHook* uptr = STATIC_CAST(UserHook*)(::menu_userptr (menu));
    assert (uptr != 0 && uptr->m_back==this && uptr->m_owner==menu);
    return uptr->m_user;
  }
Index: c++/cursesp.cc
Prereq:  1.27
--- ncurses-6.5-20240928+/c++/cursesp.cc 2020-02-02 23:34:34.000000000 +0000
+++ ncurses-6.5-20241006/c++/cursesp.cc 2024-10-05 22:47:12.000000000 +0000
@@ -1,6 +1,6 @@
// * this is for making emacs happy: -*-Mode: C++;-*-
/****************************************************************************
- * Copyright 2019,2020 Thomas E. Dickey                                     *
+ * Copyright 2019-2020,2024
 Thomas E. Dickey                                *
 * Copyright 1998-2003,2005 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -35,7 +35,7 @@
#include "internal.h"
#include "cursesp.h"

-MODULE_ID("$Id: cursesp.cc,v 1.27 2020/02/02 23:34:34 tom Exp $")
+MODULE_ID("$Id: cursesp.cc,v 1.28 2024/10/05 22:47:12 tom Exp $")

NCursesPanel* NCursesPanel::dummy = static_cast<NCursesPanel*>(0);
```

```
@@ -64,7 +64,7 @@
void
NCursesPanel::redraw()
{
-  PANEL *pan;
+  const PANEL *pan;

  pan = ::panel_above(NULL);
  while (pan) {
Index: c++/cursespad.cc
Prereq:  1.18
--- ncurses-6.5-20240928+/c++/cursespad.cc 2020-02-02 23:34:34.000000000 +0000
+++ ncurses-6.5-20241006/c++/cursespad.cc 2024-10-05 22:47:12.000000000 +0000
@@ -1,6 +1,6 @@
// * this is for making emacs happy: -*-Mode: C++;-*-
/****************************************************************************
-
 * Copyright 2020 Thomas E. Dickey                                          *
+ * Copyright 2020,2024 Thomas E. Dickey                                     *
 * Copyright 1999-2012,2013 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -36,7 +36,7 @@

#include <cursesw.h>

-MODULE_ID("$Id: cursespad.cc,v 1.18 2020/02/02 23:34:34 tom Exp $")
+MODULE_ID("$Id: cursespad.cc,v 1.19 2024/10/05 22:47:12 tom Exp $")

NCursesPad::NCursesPad(int nlines, int ncols)
  : NCursesWindow(),
@@ -221,7 +221,7 @@
void NCursesFramedPad::OnOperation(int pad_req)
{
  (void) pad_req;
-  NCursesWindow* W = Win();
+  const NCursesWindow* W = Win();
  NCursesWindow* W2 = getWindow();

  if ((static_cast<NCursesWindow*>(0) != W) && (static_cast<NCursesWindow*>(0) != W2)) {
Index: c++/cursslk.cc
Prereq:
  1.22
--- ncurses-6.5-20240928+/c++/cursslk.cc 2024-06-15 21:07:30.000000000 +0000
+++ ncurses-6.5-20241006/c++/cursslk.cc 2024-10-05 19:36:22.000000000 +0000
@@ -35,10 +35,10 @@
#include "internal.h"
```

```
#include "cursesapp.h"

-MODULE_ID("$Id: cursslk.cc,v 1.22 2024/06/15 21:07:30 tom Exp $")
+MODULE_ID("$Id: cursslk.cc,v 1.23 2024/10/05 19:36:22 tom Exp $")

Soft_Label_Key_Set::Soft_Label_Key&
-  Soft_Label_Key_Set::Soft_Label_Key::operator=(char *text)
+  Soft_Label_Key_Set::Soft_Label_Key::operator=(const char *text)
{
  delete[] label;
  size_t need = 1 + ::strlen(text);
@@ -111,11 +111,11 @@

void Soft_Label_Key_Set::activate_label(int i, bool bf) {
  if (!b_attrInit) {
-    NCursesApplication* A = NCursesApplication::getApplication();
+    const NCursesApplication* A = NCursesApplication::getApplication();
    if (A) attrset(A->labels());
    b_attrInit = TRUE;
  }
-  Soft_Label_Key& K = (*this)[i];
+  const Soft_Label_Key& K = (*this)[i];
  if (ERR==::slk_set(K.num,bf?K.label:"",K.format))
     Error("slk_set");
  noutrefresh();
@@ -124,12 +124,12 @@
void Soft_Label_Key_Set::activate_labels(bool bf)
{
  if (!b_attrInit) {
-    NCursesApplication* A = NCursesApplication::getApplication();
+    const NCursesApplication* A = NCursesApplication::getApplication();
    if (A) attrset(A->labels());
    b_attrInit = TRUE;
  }
  for(int i=1; i <= num_labels; i++) {
-    Soft_Label_Key& K = (*this)[i];
+    const Soft_Label_Key& K = (*this)[i];
    if (ERR==::slk_set(K.num,bf?K.label:"",K.format))
      Error("slk_set");
  }
Index: c++/cursslk.h
Prereq:  1.19
--- ncurses-6.5-20240928+/c++/cursslk.h 2021-04-17 18:11:08.000000000 +0000
+++ ncurses-6.5-20241006/c++/cursslk.h 2024-10-05 22:47:12.000000000 +0000
@@ -1,7 +1,7 @@
// * this is for making emacs happy: -*-Mode: C++;-*-
// vile:cppmode
/*****************************************************************************
```

```
- * Copyright 2019-2020,2021 Thomas E. Dickey
           *
+ * Copyright 2019-2021,2024 Thomas E. Dickey                              *
 * Copyright 1998-2003,2005 Free Software Foundation, Inc.                 *
 *                                                                         *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -33,7 +33,7 @@
 *   Author: Juergen Pfeifer, 1997                                         *
 ***************************************************************************/

-// $Id: cursslk.h,v 1.19 2021/04/17 18:11:08 tom Exp $
+// $Id: cursslk.h,v 1.20 2024/10/05 22:47:12 tom Exp $

 #ifndef NCURSES_CURSSLK_H_incl
 #define NCURSES_CURSSLK_H_incl
@@ -62,7 +62,7 @@

   public:
     // Set the text of the Label
-    Soft_Label_Key& operator=(char *text);
+    Soft_Label_Key& operator=(const char *text);

     // Set the Justification of the Label
     Soft_Label_Key& operator=(Justification just) {
Index: dist.mk
Prereq:  1.1634
--- ncurses-6.5-20240928+/dist.mk 2024-09-28
 09:53:21.000000000 +0000
+++ ncurses-6.5-20241006/dist.mk 2024-10-06 08:53:45.000000000 +0000
@@ -26,7 +26,7 @@
 # use or other dealings in this Software without prior written              #
 # authorization.                                                           #
 ##############################################################################
-# $Id: dist.mk,v 1.1634 2024/09/28 09:53:21 tom Exp $
+# $Id: dist.mk,v 1.1636 2024/10/06 08:53:45 tom Exp $
 # Makefile for creating ncurses distributions.
 #
 # This only needs to be used directly as a makefile by developers, but
@@ -38,7 +38,7 @@
 # These define the major/minor/patch versions of ncurses.
 NCURSES_MAJOR = 6
 NCURSES_MINOR = 5
-NCURSES_PATCH = 20240928
+NCURSES_PATCH = 20241006

 # We don't append the patch to the version, since this only applies to releases
 VERSION = $(NCURSES_MAJOR).$(NCURSES_MINOR)
Index: misc/terminfo.src
```

```
--- ncurses-6.5-20240928+/misc/terminfo.src 2024-09-07 16:23:31.000000000
 +0000
+++ ncurses-6.5-20241006/misc/terminfo.src 2024-10-05 16:04:17.000000000 +0000
@@ -6,8 +6,8 @@
# Report bugs and new terminal descriptions to
# bug-ncurses@gnu.org
#
-# $Revision: 1.1150 $
-# $Date: 2024/09/07 16:23:31 $
+# $Revision: 1.1153 $
+# $Date: 2024/10/05 16:04:17 $
#
# The original header is preserved below for reference.  It is noted that there
# is a "newer" version which differs in some cosmetic details (but actually
@@ -8060,6 +8060,17 @@
# "wezterm is a terminal emulator with support for modern features
#  such as fonts with ligatures, hyperlinks, tabs and multiple windows."
#
+# The documentation bears mention.  It refers to the "ANSI" standard and
+#  https://wezfurlong.org/wezterm/what-is-a-terminal.html#ansi-and-ecma-48
+# X3.64 (withdrawn long ago).  A related website
+# https://github.com/wez/ecma48
+# states that ECMA-48 was issued in 1979 and not revised since.  Actually that
+# was the second revision; the fifth revision in 1991 is current.  The source
+#
 code refers to the second revision in a half-dozen places.  Further, there
+# are three times as many references to Wikipedia as to xterm's documentation.
+# The git commit comments in several instances hint at an incomplete reading
+# of the relevant standards.
+#
# wezterm-20240203-110809-5046fc22 tested with MacOS
# General:
# + initial screensize is now 80x24
@@ -8094,7 +8105,7 @@
# + poor (doesn't copy anyone, most of the results are wrong)
# vttest:
# + DA is VT5xx with sixel, selective erase, user windows, color
-# + DA2 is VT220 version 277
+# + DA2 is VT220 version 277, perhaps a reference to xterm #277
# + only the VT100 character set works, contrary to DA/DA2.
# + no NRCS, either
# + double-sized character work, with some debris
@@ -8136,7 +8147,7 @@
 use=ansi+rep, use=ansi+sgrdim, use=bracketed+paste,
 use=ecma+index, use=ecma+italics, use=ecma+strikeout,
 use=report+version, use=vt220+cvis,
- use=xterm+256color2, use=xterm+alt1049,
+ use=xterm+256color2,
```

```
 use=xterm+alt+title,
 use=xterm+focus, use=xterm+pcc2, use=xterm+pce2,
 use=xterm+pcf2, use=xterm+sl-alt, use=xterm+sm+1006,
 use=xterm+tmux,
@@ -27644,4 +27655,8 @@
# 2024-09-07
# + update comments -TD
#
+# 2024-10-05
+# + use xterm+alt+title in wezterm -TD
+# + update comments -TD
+#
######## SHANTIH!  SHANTIH!  SHANTIH!
Index: ncurses/base/lib_screen.c
Prereq:  1.108
--- ncurses-6.5-20240928+/ncurses/base/lib_screen.c 2024-09-22 20:20:36.000000000 +0000
+++ ncurses-6.5-20241006/ncurses/base/lib_screen.c 2024-10-05 20:47:44.000000000 +0000
@@ -42,7 +42,7 @@
#define CUR SP_TERMTYPE
#endif

-MODULE_ID("$Id: lib_screen.c,v 1.108 2024/09/22 20:20:36 tom Exp $")
+MODULE_ID("$Id: lib_screen.c,v 1.109 2024/10/05 20:47:44 tom Exp $")

#define MAX_SIZE 0x3fff  /* 16k is big enough for a window or pad */

@@ -943,7 +943,7 @@
 * Replace a window covering the whole screen, i.e., newscr or curscr.
 */
static WINDOW *
-replace_window(WINDOW *target, FILE *source)
+replace_window(const
 WINDOW *target, FILE *source)
{
   WINDOW *result = getwin(source);
#if NCURSES_EXT_FUNCS
Index: ncurses/base/new_pair.c
Prereq:  1.24
--- ncurses-6.5-20240928+/ncurses/base/new_pair.c 2024-07-27 19:22:23.000000000 +0000
+++ ncurses-6.5-20241006/ncurses/base/new_pair.c 2024-10-05 20:51:29.000000000 +0000
@@ -61,7 +61,7 @@

#endif

-MODULE_ID("$Id: new_pair.c,v 1.24 2024/07/27 19:22:23 tom Exp $")
+MODULE_ID("$Id: new_pair.c,v 1.25 2024/10/05 20:51:29 tom Exp $")

#if NCURSES_EXT_COLORS
```

```
@@ -193,7 +193,7 @@
 * pair table.
 */
NCURSES_EXPORT(void)
-_nc_reset_color_pair(SCREEN *sp, int pair, colorpair_t * next)
+_nc_reset_color_pair(SCREEN *sp, int pair, const colorpair_t * next)
{
   colorpair_t *last;

Index: ncurses/curses.priv.h
Prereq:  1.691
--- ncurses-6.5-20240928+/ncurses/curses.priv.h 2024-09-28 15:35:01.000000000 +0000
+++ ncurses-6.5-20241006/ncurses/curses.priv.h 2024-10-05 21:01:50.000000000 +0000
@@ -35,7 +35,7 @@
 ********************************************************************************/

/*
- * $Id: curses.priv.h,v 1.691 2024/09/28 15:35:01 tom Exp $
+ * $Id: curses.priv.h,v 1.692 2024/10/05 21:01:50 tom Exp $
 *
 * curses.priv.h
 *
@@ -2170,7 +2170,7 @@
extern NCURSES_EXPORT(int) _nc_read_termcap_entry (const char *const, TERMTYPE2 *const);
extern NCURSES_EXPORT(int) _nc_setup_tinfo(const char *, TERMTYPE2 *);
extern NCURSES_EXPORT(int) _nc_setupscreen (int, int, FILE *, int, int);
-extern NCURSES_EXPORT(int) _nc_timed_wait (SCREEN *, int, int, int * EVENTLIST_2nd(_nc_eventlist *));
+extern NCURSES_EXPORT(int) _nc_timed_wait (const SCREEN *, int, int, int *
EVENTLIST_2nd(_nc_eventlist *));
extern NCURSES_EXPORT(int) _nc_trans_string (char *, const char *);
extern NCURSES_EXPORT(void) _nc_init_termtype (TERMTYPE2 *const);
extern NCURSES_EXPORT(void) _nc_do_color (int, int, int, NCURSES_OUTC);
Index: ncurses/new_pair.h
Prereq:  1.14
--- ncurses-6.5-20240928+/ncurses/new_pair.h 2024-05-25 23:10:33.000000000 +0000
+++
 ncurses-6.5-20241006/ncurses/new_pair.h 2024-10-05 20:57:47.000000000 +0000
@@ -34,7 +34,7 @@
/*
 * Common type definitions and macros for new_pair.c, lib_color.c
 *
- * $Id: new_pair.h,v 1.14 2024/05/25 23:10:33 tom Exp $
+ * $Id: new_pair.h,v 1.15 2024/10/05 20:57:47 tom Exp $
 */

#ifndef NEW_PAIR_H
@@ -116,7 +116,7 @@
```

```
#if NCURSES_EXT_FUNCS && NCURSES_EXT_COLORS
extern NCURSES_EXPORT(void)     _nc_copy_pairs(SCREEN*, colorpair_t*, colorpair_t*, int);
extern NCURSES_EXPORT(void)     _nc_free_ordered_pairs(SCREEN*);
-extern NCURSES_EXPORT(void)     _nc_reset_color_pair(SCREEN*, int, colorpair_t*);
+extern NCURSES_EXPORT(void)     _nc_reset_color_pair(SCREEN*, int, const colorpair_t*);
extern NCURSES_EXPORT(void)     _nc_set_color_pair(SCREEN*, int, int);
#else
#define _nc_free_ordered_pairs(sp) /* nothing */
Index: ncurses/tinfo/trim_sgr0.c
Prereq:  1.23
--- ncurses-6.5-20240928+/ncurses/tinfo/trim_sgr0.c 2024-07-27 19:22:23.000000000 +0000
+++ ncurses-6.5-20241006/ncurses/tinfo/trim_sgr0.c 2024-10-05
 20:53:48.000000000 +0000
@@ -37,7 +37,7 @@

#include <tic.h>

-MODULE_ID("$Id: trim_sgr0.c,v 1.23 2024/07/27 19:22:23 tom Exp $")
+MODULE_ID("$Id: trim_sgr0.c,v 1.24 2024/10/05 20:53:48 tom Exp $")

#undef CUR
#define CUR tp->
@@ -237,12 +237,10 @@

   if (PRESENT(exit_attribute_mode)
 && PRESENT(set_attributes)) {
- bool found = FALSE;
 char *on = set_attribute_9(tp, 1);
 char *off = set_attribute_9(tp, 0);
 char *end = strdup(exit_attribute_mode);
 char *tmp;
- size_t i, j, k;

 TR(TRACE_DATABASE, ("checking if we can trim sgr0 based on sgr"));
 TR(TRACE_DATABASE, ("sgr0       %s", _nc_visbuf(end)));
@@ -255,6 +253,9 @@
    FreeIfNeeded(off);
 } else if (similar_sgr(off, end)
    && !similar_sgr(off, on)) {
+    bool found = FALSE;
+    size_t i, j, k;
+
    TR(TRACE_DATABASE, ("adjusting sgr(9:off) : %s", _nc_visbuf(off)));
    result = off;
    /*
Index: ncurses/tty/lib_twait.c
Prereq:  1.81
--- ncurses-6.5-20240928+/ncurses/tty/lib_twait.c 2023-09-16
```

```
 16:30:40.000000000 +0000
+++ ncurses-6.5-20241006/ncurses/tty/lib_twait.c 2024-10-05 22:47:12.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018-2020,2023 Thomas E. Dickey                                *
+ * Copyright 2018-2023,2024 Thomas E. Dickey                                *
 * Copyright 1998-2015,2016 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -76,7 +76,7 @@
#endif
#undef CUR

-MODULE_ID("$Id: lib_twait.c,v 1.81 2023/09/16 16:30:40 tom Exp $")
+MODULE_ID("$Id: lib_twait.c,v 1.82 2024/10/05 22:47:12 tom Exp $")

/*
 * Returns an elapsed time, in milliseconds (if possible).
@@ -168,7 +168,7 @@
 * descriptors.
 */
NCURSES_EXPORT(int)
-_nc_timed_wait(SCREEN *sp MAYBE_UNUSED,
+_nc_timed_wait(const
 SCREEN *sp MAYBE_UNUSED,
        int mode MAYBE_UNUSED,
        int milliseconds,
        int *timeleft
Index: package/debian-mingw/changelog
--- ncurses-6.5-20240928+/package/debian-mingw/changelog 2024-09-28 09:53:21.000000000 +0000
+++ ncurses-6.5-20241006/package/debian-mingw/changelog 2024-10-06 08:53:45.000000000 +0000
@@ -1,8 +1,8 @@
-ncurses6td (6.5+20240928) unstable; urgency=low
+ncurses6td (6.5+20241006) unstable; urgency=low

  * latest weekly patch

- -- Thomas E. Dickey <dickey@invisible-island.net>  Sat, 28 Sep 2024 05:53:21 -0400
+ -- Thomas E. Dickey <dickey@invisible-island.net>  Sun, 06 Oct 2024 04:53:45 -0400

ncurses6 (5.9+20131005) unstable; urgency=low

Index: package/debian-mingw64/changelog
--- ncurses-6.5-20240928+/package/debian-mingw64/changelog 2024-09-28 09:53:21.000000000 +0000
+++ ncurses-6.5-20241006/package/debian-mingw64/changelog 2024-10-06 08:53:45.000000000 +0000
@@ -1,8 +1,8 @@
-ncurses6td (6.5+20240928) unstable; urgency=low
+ncurses6td
```

```
 (6.5+20241006) unstable; urgency=low

  * latest weekly patch

- -- Thomas E. Dickey <dickey@invisible-island.net>  Sat, 28 Sep 2024 05:53:21 -0400
+ -- Thomas E. Dickey <dickey@invisible-island.net>  Sun, 06 Oct 2024 04:53:45 -0400

ncurses6 (5.9+20131005) unstable; urgency=low

Index: package/debian/changelog
--- ncurses-6.5-20240928+/package/debian/changelog 2024-09-28 09:53:21.000000000 +0000
+++ ncurses-6.5-20241006/package/debian/changelog 2024-10-06 08:53:45.000000000 +0000
@@ -1,8 +1,8 @@
-ncurses6td (6.5+20240928) unstable; urgency=low
+ncurses6td (6.5+20241006) unstable; urgency=low

  * latest weekly patch

- -- Thomas E. Dickey <dickey@invisible-island.net>  Sat, 28 Sep 2024 05:53:21 -0400
+ -- Thomas E. Dickey <dickey@invisible-island.net>  Sun, 06 Oct 2024 04:53:45 -0400

ncurses6 (5.9+20120608) unstable; urgency=low

Index: package/mingw-ncurses.nsi
Prereq:  1.669
--- ncurses-6.5-20240928+/package/mingw-ncurses.nsi 2024-09-28 09:53:21.000000000 +0000
+++
 ncurses-6.5-20241006/package/mingw-ncurses.nsi 2024-10-06 08:53:45.000000000 +0000
@@ -1,4 +1,4 @@
-; $Id: mingw-ncurses.nsi,v 1.669 2024/09/28 09:53:21 tom Exp $
+; $Id: mingw-ncurses.nsi,v 1.671 2024/10/06 08:53:45 tom Exp $

; TODO add examples
; TODO bump ABI to 6
@@ -10,7 +10,7 @@
!define VERSION_MAJOR "6"
!define VERSION_MINOR "5"
!define VERSION_YYYY  "2024"
-!define VERSION_MMDD  "0928"
+!define VERSION_MMDD  "1006"
!define VERSION_PATCH ${VERSION_YYYY}${VERSION_MMDD}

!define MY_ABI   "5"
Index: package/mingw-ncurses.spec
--- ncurses-6.5-20240928+/package/mingw-ncurses.spec 2024-09-28 09:53:21.000000000 +0000
+++ ncurses-6.5-20241006/package/mingw-ncurses.spec 2024-10-06 08:53:45.000000000 +0000
@@ -3,7 +3,7 @@
Summary: shared libraries for terminal handling
```

```
Name: mingw32-ncurses6
Version: 6.5
-Release: 20240928
+Release: 20241006
License: X11
Group: Development/Libraries
URL: https://invisible-island.net/ncurses/
Index: package/ncurses.spec
--- ncurses-6.5-20240928+/package/ncurses.spec 2024-09-28
 09:53:21.000000000 +0000
+++ ncurses-6.5-20241006/package/ncurses.spec 2024-10-06 08:53:45.000000000 +0000
@@ -1,7 +1,7 @@
Summary: shared libraries for terminal handling
Name: ncurses6
Version: 6.5
-Release: 20240928
+Release: 20241006
License: X11
Group: Development/Libraries
URL: https://invisible-island.net/ncurses/
Index: package/ncursest.spec
--- ncurses-6.5-20240928+/package/ncursest.spec 2024-09-28 09:53:21.000000000 +0000
+++ ncurses-6.5-20241006/package/ncursest.spec 2024-10-06 08:53:45.000000000 +0000
@@ -1,7 +1,7 @@
Summary: Curses library with POSIX thread support.
Name: ncursest6
Version: 6.5
-Release: 20240928
+Release: 20241006
License: X11
Group: Development/Libraries
Source: ncurses-%{version}-%{release}.tgz
Index: test/blue.c
Prereq:  1.55
--- ncurses-6.5-20240928+/test/blue.c 2022-12-10 23:31:31.000000000 +0000
+++ ncurses-6.5-20241006/test/blue.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2019-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 1998-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -37,7 +37,7 @@
 ****************************************************************************/

/*
```

```
- * $Id: blue.c,v 1.55 2022/12/10 23:31:31 tom Exp $
+ * $Id: blue.c,v 1.56 2024/10/05 19:26:24 tom Exp $
 */

#include <test.priv.h>
@@ -437,7 +437,7 @@
static void
use_pc_display(void)
{
-    char *check = nl_langinfo(CODESET);
+    const char *check = nl_langinfo(CODESET);
    if (!strcmp(check, "UTF-8")) {
#if USE_WIDEC_SUPPORT
 suits = uglyphs;
@@ -448,8 +448,8 @@
     !strcmp(check, "CP437") ||
     !strcmp(check,
 "IBM850") ||
     !strcmp(check, "CP850")) {
-     char *smacs = tigetstr("smacs");
-     char *smpch = tigetstr("smpch");
+     const char *smacs = tigetstr("smacs");
+     const char *smpch = tigetstr("smpch");
     /*
      * The ncurses library makes this check to decide whether to allow
      * the alternate character set for the (normally) nonprinting codes.
Index: test/bs.c
Prereq:  1.79
--- ncurses-6.5-20240928+/test/bs.c 2023-05-27 20:13:10.000000000 +0000
+++ ncurses-6.5-20241006/test/bs.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2018-2023,2024 Thomas E. Dickey                                *
 * Copyright 1998-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge,
 to any person obtaining a  *
@@ -35,7 +35,7 @@
 * v2.0 featuring strict ANSI/POSIX conformance, November 1993.
 * v2.1 with ncurses mouse support, September 1995
 *
- * $Id: bs.c,v 1.79 2023/05/27 20:13:10 tom Exp $
+ * $Id: bs.c,v 1.80 2024/10/05 19:26:24 tom Exp $
 */

#include <test.priv.h>
@@ -147,7 +147,7 @@
```

```
   bool placed;  /* has it been placed on the board? */
} ship_t;

-static bool checkplace(int b, ship_t * ss, int vis);
+static bool checkplace(int b, const ship_t * ss, int vis);

#define SHIPIT(name, symbol, length) { name, 0, symbol, length, 0,0, 0, FALSE }

@@ -686,7 +686,7 @@
}

static bool
-checkplace(int b, ship_t * ss, int vis)
+checkplace(int b, const ship_t * ss, int vis)
{
   int l, xend, yend;

Index: test/cardfile.c
Prereq:  1.51
--- ncurses-6.5-20240928+/test/cardfile.c 2022-12-04 00:40:11.000000000 +0000
+++ ncurses-6.5-20241006/test/cardfile.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2019-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 1999-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -30,7 +30,7 @@
/*
 * Author: Thomas E. Dickey
 *
- * $Id: cardfile.c,v 1.51 2022/12/04 00:40:11 tom Exp $
+ * $Id: cardfile.c,v 1.52 2024/10/05 19:26:24 tom Exp $
 *
 * File format: text beginning in column 1 is a title; other text is content.
 */
@@ -161,7 +161,7 @@
}

static CARD *
-find_card(char *title)
+find_card(const char *title)
{
   CARD *card;

@@ -173,7 +173,7 @@
```

```
}

static void
-read_data(char *fname)
+read_data(const char *fname)
{
   FILE *fp;

@@ -341,7 +341,7 @@
}

static FIELD **
-make_fields(CARD * p, int form_high,
 int form_wide)
+make_fields(const CARD * p, int form_high, int form_wide)
{
   FIELD **f = typeCalloc(FIELD *, (size_t) 3);

@@ -385,7 +385,7 @@
/****************************************************************************/

static void
-cardfile(char *fname)
+cardfile(const char *fname)
{
   WINDOW *win;
   CARD *p;
Index: test/chgat.c
Prereq:  1.21
--- ncurses-6.5-20240928+/test/chgat.c 2024-06-29 17:45:32.000000000 +0000
+++ ncurses-6.5-20241006/test/chgat.c 2024-10-06 22:35:55.000000000 +0000
@@ -27,7 +27,7 @@
 * authorization.                                       *
 ****************************************************************************/
/*
- * $Id: chgat.c,v 1.21 2024/06/29 17:45:32 tom Exp $
+ * $Id: chgat.c,v 1.23 2024/10/06 22:35:55 tom Exp $
 *
 * test-driver for chgat/wchgat/mvchgat/mvwchgat
 */
@@ -160,7 +160,7 @@
}

static void
-do_subwindow(WINDOW *win, STATUS * sp, void func(WINDOW *))
+do_subwindow(WINDOW *win, const STATUS
 * sp, void func(WINDOW *))
{
```

```
   WINDOW *win1 = newwin(sp->y_max - 2, sp->x_max - 2,
    sp->y_beg + 1, sp->x_beg + 1);
@@ -204,7 +204,7 @@
static void
show_help(WINDOW *win)
{
-    static const char *msgs[] =
+    static NCURSES_CONST char *msgs[] =
    {
 "Basic commands:"
 ,"Use h/j/k/l or arrow keys to move the cursor."
Index: test/clip_printw.c
Prereq:  1.23
--- ncurses-6.5-20240928+/test/clip_printw.c 2023-09-30 19:57:44.000000000 +0000
+++ ncurses-6.5-20241006/test/clip_printw.c 2024-10-06 22:36:25.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2019-2023,2024 Thomas E. Dickey                                *
 * Copyright 2008-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge,
 to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: clip_printw.c,v 1.23 2023/09/30 19:57:44 tom Exp $
+ * $Id: clip_printw.c,v 1.25 2024/10/06 22:36:25 tom Exp $
 *
 * demonstrate how to use printw with/without wrapping.
 */
@@ -212,7 +212,7 @@
}

static void
-do_subwindow(WINDOW *win, STATUS * sp, void func(WINDOW *))
+do_subwindow(WINDOW *win, const STATUS * sp, void func(WINDOW *))
{
    WINDOW *win1 = newwin(sp->y_max - (2 * MARGIN),
     sp->x_max - (2 * MARGIN),
@@ -268,7 +268,7 @@
static void
show_help(WINDOW *win)
{
-    static const char *msgs[] =
+    static NCURSES_CONST char *msgs[] =
    {
```

```
 "Basic commands:"
 ,"Use h/j/k/l or arrow keys to move the cursor."
Index: test/color_name.h
Prereq:  1.9
--- ncurses-6.5-20240928+/test/color_name.h 2021-04-24 23:25:29.000000000 +0000
+++ ncurses-6.5-20241006/test/color_name.h 2024-10-05
 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/*****************************************************************************
- * Copyright 2018-2020,2021 Thomas E. Dickey                                 *
+ * Copyright 2018-2021,2024 Thomas E. Dickey                                 *
 * Copyright 2011-2012,2016 Free Software Foundation, Inc.                   *
 *                                                                           *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                            *
 *****************************************************************************/
/*
- * $Id: color_name.h,v 1.9 2021/04/24 23:25:29 tom Exp $
+ * $Id: color_name.h,v 1.10 2024/10/05 19:26:24 tom Exp $
 */

#ifndef __COLORNAME_H
@@ -63,7 +63,6 @@
{
   int result = 0;
   char *endp = 0;
-   size_t n;

   if ((result = (int) strtol(color,
 &endp, 0)) >= 0
 && (endp == 0 || *endp == 0)) {
@@ -71,6 +70,7 @@
   } else if (!strcmp(color, "default")) {
 result = -1;
   } else {
+ size_t n;
 for (n = 0; n < SIZEOF(the_color_names); ++n) {
     if (!strcmp(the_color_names[n], color)) {
  result = (int) n;
Index: test/demo_defkey.c
Prereq:  1.35
--- ncurses-6.5-20240928+/test/demo_defkey.c 2024-01-20 20:46:12.000000000 +0000
+++ ncurses-6.5-20241006/test/demo_defkey.c 2024-10-05 18:20:04.000000000 +0000
@@ -27,7 +27,7 @@
 * authorization.                                                            *
 *****************************************************************************/
/*
```

```
- * $Id: demo_defkey.c,v 1.35 2024/01/20 20:46:12 tom Exp $
+ * $Id: demo_defkey.c,v 1.36 2024/10/05 18:20:04 tom Exp $
 *
 * Demonstrate the define_key() function.
 * Thomas Dickey - 2002/11/23
@@ -199,7 +199,7 @@
}

static void
-redefine(WINDOW *win, char *string, int code)
+redefine(WINDOW *win, const char *string, int code)
{

  really_define_key(win, string, code);
}
Index: test/demo_forms.c
Prereq:  1.63
--- ncurses-6.5-20240928+/test/demo_forms.c 2023-11-11 00:29:53.000000000 +0000
+++ ncurses-6.5-20241006/test/demo_forms.c 2024-10-06 21:15:12.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2018-2023,2024 Thomas E. Dickey                                *
 * Copyright 2003-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: demo_forms.c,v 1.63 2023/11/11 00:29:53 tom Exp $
+ * $Id: demo_forms.c,v 1.67
 2024/10/06 21:15:12 tom Exp $
 *
 * Demonstrate a variety of functions from the form library.
 * Thomas Dickey - 2003/4/26
@@ -148,7 +148,7 @@
}

static FIELD *
-make_label(const char *label, int frow, int fcol)
+make_label(NCURSES_CONST char *label, int frow, int fcol)
{
   FIELD *f = new_field(1, (int) strlen(label), frow, fcol, 0, 0);

@@ -242,7 +242,7 @@
#define O_SELECTABLE (O_ACTIVE | O_VISIBLE)
```

```
static FIELD *
-another_field(FORM *form, const FIELD *const field)
+another_field(NCURSES_CONST FORM *form, NCURSES_CONST FIELD *const field)
{
   FIELD **f = form_fields(form);
   FIELD *result = 0;
@@ -306,9 +306,9 @@
}

static void
-show_current_field(WINDOW *win, FORM *form)
+show_current_field(WINDOW *win, NCURSES_CONST FORM *form)
{
-    FIELD *field;
+    NCURSES_CONST FIELD *field;
    int field_rows, field_cols, field_max;
    int currow, curcol;

@@ -325,7 +325,7 @@
    waddch(win, '\n');

    if ((field = current_field(form)) != 0) {
- FIELDTYPE *type;
+ NCURSES_CONST
 FIELDTYPE *type;
 int nbuf;

 wprintw(win, "Page %d%s, Field %d/%d%s:",
@@ -383,7 +383,7 @@

 waddstr(win, "\n");
 for (nbuf = 0; nbuf <= 2; ++nbuf) {
-     char *buffer;
+     NCURSES_CONST char *buffer;
     if ((buffer = field_buffer(field, nbuf)) != 0) {
  wprintw(win, "buffer %d:", nbuf);
  (void) wattrset(win, A_REVERSE);
@@ -408,8 +408,8 @@
    int c;
    unsigned n = 0;
    int pg;
-    const char *fname;
-    static const char *my_enum[] =
+    NCURSES_CONST char *fname;
+    static NCURSES_CONST char *my_enum[] =
    {"first", "second", "third", 0};

#ifdef NCURSES_MOUSE_VERSION
```

```
@@ -515,7 +515,7 @@
   f[n] = (FIELD *) 0;

   if ((form = new_form(f)) != 0) {
- WINDOW *w;
+ NCURSES_CONST WINDOW *w;
  WINDOW *also;
  int finished = 0;

Index: test/demo_menus.c
Prereq:  1.80
--- ncurses-6.5-20240928+/test/demo_menus.c 2023-05-27 20:13:10.000000000 +0000
+++ ncurses-6.5-20241006/test/demo_menus.c 2024-10-06 19:58:28.000000000 +0000
@@ -1,5
 +1,5 @@
/****************************************************************************
- * Copyright 2019-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2019-2023,2024 Thomas E. Dickey                                *
  * Copyright 2003-2016,2017 Free Software Foundation, Inc.                  *
  *                                                                          *
  * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
  * authorization.                                                           *
  ****************************************************************************/
/*
- * $Id: demo_menus.c,v 1.80 2023/05/27 20:13:10 tom Exp $
+ * $Id: demo_menus.c,v 1.82 2024/10/06 19:58:28 tom Exp $
  *
  * Demonstrate a variety of functions from the menu library.
  * Thomas Dickey - 2005/4/9
@@ -185,7 +185,7 @@
}

static int
-menu_getc(MENU * m)
+menu_getc(NCURSES_CONST MENU * m)
{
   return wGetchar(menu_win(m));
 }
@@ -214,7 +214,7 @@
my_menu_init(MENU * menu)
{
   Trace(("called MenuHook my_menu_init"));
-    mvwprintw(status, 2, 0, "menu_init %p", (void *) menu);
+    mvwprintw(status, 2, 0, "menu_init %p", (const void *) menu);
   wclrtoeol(status);
   wrefresh(status);
}
```

```
@@ -223,7 +223,7 @@
my_menu_term(MENU * menu)
{
   Trace(("called MenuHook my_menu_term"));
-   mvwprintw(status, 2, 0, "menu_term %p", (void *) menu);
+    mvwprintw(status, 2, 0, "menu_term %p", (const void *) menu);
   wclrtoeol(status);
   wrefresh(status);
}
@@ -231,7 +231,7 @@
static void
my_item_init(MENU * menu)
{
-   ITEM *item = current_item(menu);
+    NCURSES_CONST ITEM *item = current_item(menu);
   const char *name = item_name(item);

   Trace(("called MenuHook my_item_init (%s)", name));
@@ -243,7 +243,7 @@
static void
my_item_term(MENU * menu)
{
-   ITEM *item = current_item(menu);
+    NCURSES_CONST ITEM *item = current_item(menu);
   const char *name = item_name(item);

   Trace(("called MenuHook my_item_term (%s)", name));
@@ -348,7 +348,7 @@

/* force the given menu to appear */
static void
-menu_display(MENU * m)
+menu_display(NCURSES_CONST MENU * m)
{
   touchwin(menu_win(m));
   wrefresh(menu_win(m));
@@ -584,10 +584,10 @@
 * the others
 */
static bool
-update_trace_menu(MENU * m)
+update_trace_menu(NCURSES_CONST MENU * m)
{
   ITEM **items;
-   ITEM *i;
+    NCURSES_CONST ITEM *i;
   bool changed = FALSE;
```

```
   items = menu_items(m);
@@ -613,7 +613,7 @@
   int result;

   for (ip = menu_items(mpTrace); *ip; ip++) {
- MENU_DATA *td = (MENU_DATA *) item_userptr(*ip);
+ NCURSES_CONST MENU_DATA *td = (MENU_DATA *) item_userptr(*ip);
  unsigned mask = td->mask;
  if (mask == 0)
     set_item_value(*ip, _nc_tracing == 0);
@@ -628,7 +628,7 @@
     unsigned newtrace = 0;
     for (ip = menu_items(mpTrace); *ip; ip++) {
   if (item_value(*ip)) {
-      MENU_DATA *td = (MENU_DATA *) item_userptr(*ip);
+      NCURSES_CONST
  MENU_DATA *td = (MENU_DATA *) item_userptr(*ip);
      newtrace |= td->mask;
   }
@@ -718,7 +718,9 @@
 }

 static int
-move_menu(MENU * menu, MENU * current, int by_y, int by_x)
+move_menu(NCURSES_CONST MENU * menu,
+   NCURSES_CONST MENU * current,
+   int by_y, int by_x)
 {
   WINDOW *top_win = menu_win(menu);
   WINDOW *sub_win = menu_sub(menu);
@@ -798,7 +800,7 @@
 #endif /* defined(KEY_RESIZE) && NCURSES_EXT_FUNCS */

 static void
-show_status(int ch, MENU * menu)
+show_status(int ch, NCURSES_CONST MENU * menu)
 {
   wmove(status, 0, 0);
   wprintw(status, "key %s, menu %d, mark %s, match %s",
@@ -919,7 +921,7 @@
  wrefresh(menu_win(last_menu));
  if (code == E_UNKNOWN_COMMAND
     || code == E_NOT_POSTED) {
-     ITEM *item = current_item(last_menu);
+     NCURSES_CONST ITEM *item = current_item(last_menu);
     MENU_DATA *td = (MENU_DATA *) item_userptr(item);
     td->func((int) td->mask);
```

```
 }
Index: test/demo_new_pair.c
Prereq:  1.28
--- ncurses-6.5-20240928+/test/demo_new_pair.c 2024-06-29
 19:30:26.000000000 +0000
+++ ncurses-6.5-20241006/test/demo_new_pair.c 2024-10-05 18:21:44.000000000 +0000
@@ -27,7 +27,7 @@
 * authorization.                                          *
 ****************************************************************************/
/*
- * $Id: demo_new_pair.c,v 1.28 2024/06/29 19:30:26 tom Exp $
+ * $Id: demo_new_pair.c,v 1.29 2024/10/05 18:21:44 tom Exp $
 *
 * Demonstrate the alloc_pair() function.
 */
@@ -49,7 +49,7 @@
static bool
valid_cap(NCURSES_CONST char *name)
{
-    char *value = tigetstr(name);
+    const char *value = tigetstr(name);
    return (value != 0 && value != (char *) -1) ? TRUE : FALSE;
}

Index: test/demo_panels.c
Prereq:  1.48
--- ncurses-6.5-20240928+/test/demo_panels.c 2022-12-04 00:40:11.000000000 +0000
+++ ncurses-6.5-20241006/test/demo_panels.c 2024-10-06 20:01:21.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2018-2020,2022 Thomas E. Dickey                                *
+ * Copyright 2018-2022,2024 Thomas E. Dickey                                *
 * Copyright 2003-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                          *
 ****************************************************************************/
/*
- * $Id: demo_panels.c,v 1.48 2022/12/04 00:40:11 tom Exp $
+ * $Id: demo_panels.c,v 1.50 2024/10/06 20:01:21 tom Exp $
 *
 * Demonstrate a variety of functions from the panel library.
 */
@@ -42,7 +42,7 @@
#define TEMP_POS '>'
```

```
typedef void (*InitPanel) (void);
-typedef void (*FillPanel) (PANEL *);
+typedef void (*FillPanel) (NCURSES_CONST PANEL *);

static bool use_colors = FALSE;
static bool
 unboxed = FALSE;
@@ -301,7 +301,7 @@
 int code;
 int y0, x0;
 int y1, x1;
- WINDOW *win = panel_window(pans[which]);
+ NCURSES_CONST WINDOW *win = panel_window(pans[which]);
 char also[80];

 getbegyx(win, y0, x0);
@@ -368,7 +368,7 @@
}

static void
-fill_panel(PANEL *pan)
+fill_panel(NCURSES_CONST PANEL *pan)
{
   WINDOW *win = panel_window(pan);
   const char *userptr = (const char *) panel_userptr(pan);
@@ -388,7 +388,7 @@
}

static void
-fill_unboxed(PANEL *pan)
+fill_unboxed(NCURSES_CONST PANEL *pan)
{
   WINDOW *win = panel_window(pan);
   const char *userptr = (const char *) panel_userptr(pan);
@@ -431,7 +431,7 @@
}

static void
-fill_wide_panel(PANEL *pan)
+fill_wide_panel(NCURSES_CONST PANEL *pan)
{
   WINDOW *win = panel_window(pan);
   int num = ((const char *) panel_userptr(pan))[1];
@@ -453,7 +453,7 @@
#define MAX_PANELS 5

static int
-which_panel(PANEL *px[MAX_PANELS + 1], PANEL *pan)
```

```
+which_panel(PANEL *px[MAX_PANELS + 1], NCURSES_CONST
 PANEL *pan)
{
   int result = 0;
   int j;
Index: test/demo_termcap.c
Prereq:  1.65
--- ncurses-6.5-20240928+/test/demo_termcap.c 2023-05-27 20:13:10.000000000 +0000
+++ ncurses-6.5-20241006/test/demo_termcap.c 2024-10-06 20:05:09.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2019-2023,2024 Thomas E. Dickey                                *
 * Copyright 2005-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -30,7 +30,7 @@
/*
 * Author: Thomas E. Dickey
 *
- * $Id: demo_termcap.c,v 1.65 2023/05/27 20:13:10 tom Exp $
+ * $Id: demo_termcap.c,v 1.70 2024/10/06 20:05:09 tom Exp $
 *
 * A simple demo of the termcap interface.
 */
@@ -256,7 +256,7 @@

   * to hold all of the strings extracted from the terminal entry.
    */
   char area[1024], *ap = area;
-    char *str;
+    NCURSES_CONST char *str;
   int num;

   if ((str = tgetstr(cap, &ap)) != 0) {
@@ -289,7 +289,7 @@
}

static void
-brute_force(const char *name)
+brute_force(NCURSES_CONST char *name)
{
   char buffer[1024];

@@ -369,7 +369,7 @@
#ifdef NCURSES_VERSION
 if (x_opt && (my_blob == 0) && y_opt) {
#if NCURSES_XNAMES
```

```
-     TERMTYPE *term = (TERMTYPE *) cur_term;
+     NCURSES_CONST TERMTYPE *term = (TERMTYPE *) cur_term;
      if (term != 0
   && ((NUM_BOOLEANS(term) != BOOLCOUNT)
       || (NUM_NUMBERS(term) != NUMCOUNT)
@@ -781,12 +781,12 @@
 {
    int ch;
    int n;
-    char *name;
+    NCURSES_CONST char *name;
    bool a_opt = FALSE;
 #if defined(NCURSES_VERSION) || defined(HAVE_CURSES_DATA_OSPEED)
    bool v_opt = FALSE;
 #endif
-    char *input_name = 0;
+    NCURSES_CONST char *input_name = 0;

    int repeat;
    int r_opt = 1;
@@ -867,7
 +867,7 @@
     } else if ((name = getenv("TERM")) != 0) {
   brute_force(name);
     } else {
-  static char dumb[] = "dumb";
+  static NCURSES_CONST char dumb[] = "dumb";
   brute_force(dumb);
     }
  }
@@ -894,7 +894,7 @@
     } else if ((name = getenv("TERM")) != 0) {
   demo_termcap(name);
     } else {
-  static char dumb[] = "dumb";
+  static NCURSES_CONST char dumb[] = "dumb";
   demo_termcap(dumb);
     }
  }
Index: test/demo_terminfo.c
Prereq:  1.57
--- ncurses-6.5-20240928+/test/demo_terminfo.c 2023-05-27 20:13:10.000000000 +0000
+++ ncurses-6.5-20241006/test/demo_terminfo.c 2024-10-06 21:16:43.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2019-2023,2024 Thomas E. Dickey                                *
  * Copyright 2009-2016,2017 Free Software Foundation, Inc.                  *
```

```
 *
                                        *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -30,7 +30,7 @@
/*
 * Author: Thomas E. Dickey
 *
- * $Id: demo_terminfo.c,v 1.57 2023/05/27 20:13:10 tom Exp $
+ * $Id: demo_terminfo.c,v 1.59 2024/10/06 21:16:43 tom Exp $
 *
 * A simple demo of the terminfo interface.
 */
@@ -253,7 +253,7 @@
#define LegalItem(c,n) (n)

static void
-brute_force(const char *name)
+brute_force(NCURSES_CONST char *name)
{
#define MAX_FORCE 5  /* omit "colors", since CPU-time is a problem */
   static const char legal[] = "\
@@ -324,7 +324,7 @@
#endif

static void
-demo_terminfo(char *name)
+demo_terminfo(NCURSES_CONST char *name)
{
   unsigned n;
   NCURSES_CONST char *cap;
@@ -366,7 +366,7 @@
   if (x_opt && (my_blob == 0)) {
 if (y_opt) {
#if NCURSES_XNAMES
-    TERMTYPE *term = (TERMTYPE *) cur_term;
+    const TERMTYPE *term = (TERMTYPE *) cur_term;
    if (term != 0
  && ((NUM_BOOLEANS(term)
 != BOOLCOUNT)
     || (NUM_NUMBERS(term) != NUMCOUNT)
@@ -813,9 +813,9 @@
   int ch;
   int n;
   int repeat;
-   char *name;
+   NCURSES_CONST char *name;
   int r_opt = 1;
-   char *input_name = 0;
```

```
+    const char *input_name = 0;

    while ((ch = getopt(argc, argv, OPTS_COMMON "abd:e:fi:nqr:sxy")) != -1) {
 switch (ch) {
@@ -891,7 +891,7 @@
     } else if ((name = getenv("TERM")) != 0) {
  brute_force(name);
     } else {
-  static char dumb[] = "dumb";
+  static NCURSES_CONST char dumb[] = "dumb";
  brute_force(dumb);
     }
 }
@@ -918,7 +918,7 @@
     } else if ((name = getenv("TERM")) != 0) {
  demo_terminfo(name);
     } else {
-  static char dumb[] = "dumb";
+  static NCURSES_CONST char dumb[] = "dumb";
  demo_terminfo(dumb);
     }
 }
Index: test/dots.c
Prereq:  1.45
--- ncurses-6.5-20240928+/test/dots.c 2023-01-07 17:21:48.000000000 +0000
+++ ncurses-6.5-20241006/test/dots.c 2024-10-06 21:17:54.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2019-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2019-2023,2024 Thomas E. Dickey                                *
 * Copyright 1999-2013,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -30,7 +30,7 @@
/*
 * Author: Thomas E. Dickey <dickey@clark.net> 1999
 *
- * $Id: dots.c,v 1.45 2023/01/07 17:21:48 tom Exp $
+ * $Id: dots.c,v 1.46 2024/10/06 21:17:54 tom Exp $
 *
 * A simple demo of the terminfo interface.
 */
@@ -61,7 +61,7 @@
}

static bool
-outs(const char *s)
```

```
+outs(NCURSES_CONST char *s)
{
   if (VALID_STRING(s)) {
 tputs(s, 1, outc);
Index: test/dots_mvcur.c
Prereq:  1.31
--- ncurses-6.5-20240928+/test/dots_mvcur.c 2023-01-07 17:21:48.000000000 +0000
+++ ncurses-6.5-20241006/test/dots_mvcur.c 2024-10-06
 21:17:54.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2019-2023,2024 Thomas E. Dickey                                *
 * Copyright 2007-2013,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -30,7 +30,7 @@
/*
 * Author: Thomas E. Dickey - 2007
 *
- * $Id: dots_mvcur.c,v 1.31 2023/01/07 17:21:48 tom Exp $
+ * $Id: dots_mvcur.c,v 1.32 2024/10/06 21:17:54 tom Exp $
 *
 * A simple demo of the terminfo interface, and mvcur.
 */
@@ -62,7 +62,7 @@
}

static bool
-outs(const char *s)
+outs(NCURSES_CONST char *s)
{
   if (VALID_STRING(s)) {
 tputs(s, 1, outc);
Index: test/dots_termcap.c
Prereq:  1.33
--- ncurses-6.5-20240928+/test/dots_termcap.c 2024-08-31
 15:55:46.000000000 +0000
+++ ncurses-6.5-20241006/test/dots_termcap.c 2024-10-06 21:18:35.000000000 +0000
@@ -30,7 +30,7 @@
/*
 * Author: Thomas E. Dickey
 *
- * $Id: dots_termcap.c,v 1.33 2024/08/31 15:55:46 tom Exp $
+ * $Id: dots_termcap.c,v 1.35 2024/10/06 21:18:35 tom Exp $
 *
 * A simple demo of the termcap interface.
 */
```

```
@@ -113,7 +113,7 @@
}

static bool
-outs(char *s)
+outs(NCURSES_CONST char *s)
{
   if (VALID_STRING(s)) {
 tputs(s, 1, outc);
@@ -178,7 +178,7 @@
get_number(NCURSES_CONST char *cap, const char *env)
{
   int result = tgetnum(cap);
-   char *value = env ? getenv(env) : 0;
+   const char *value = env ? getenv(env) : 0;
   if (value != 0 && *value != 0) {
 char *next = 0;
 long check = strtol(value, &next, 10);
@@ -229,7 +229,7 @@
   double c;
   char buffer[1024];
   char area[1024];
-   char *name;
+   NCURSES_CONST char *name;
   size_t need;
   char *my_env;

Index: test/dup_field.c
Prereq:  1.9
--- ncurses-6.5-20240928+/test/dup_field.c 2024-06-29
 17:45:32.000000000 +0000
+++ ncurses-6.5-20241006/test/dup_field.c 2024-10-06 20:07:19.000000000 +0000
@@ -26,7 +26,7 @@
 * authorization.                                        *
 ****************************************************************************/
/*
- * $Id: dup_field.c,v 1.9 2024/06/29 17:45:32 tom Exp $
+ * $Id: dup_field.c,v 1.11 2024/10/06 20:07:19 tom Exp $
 *
 * Demonstrate dup_field().
 */
@@ -146,27 +146,27 @@
}

static FieldAttrs *
-my_field_attrs(FIELD *f)
+my_field_attrs(NCURSES_CONST FIELD *f)
{
```

```
   return (FieldAttrs *) field_userptr(f);
}

static int
-buffer_length(FIELD *f)
+buffer_length(NCURSES_CONST FIELD *f)
{
   return my_field_attrs(f)->row_lengths[0];
}

static void
-set_buffer_length(FIELD *f, int length)
+set_buffer_length(NCURSES_CONST FIELD *f, int length)
{
   my_field_attrs(f)->row_lengths[0] = length;
}

static int
-offset_in_field(FORM *form)
+offset_in_field(NCURSES_CONST
 FORM *form)
{
-    FIELD *field = current_field(form);
+    NCURSES_CONST FIELD *field = current_field(form);
   int currow, curcol;

   form_getyx(form, currow, curcol);
@@ -245,7 +245,7 @@

 default:
     modified = (ch < MIN_FORM_COMMAND
-   && isprint(ch));
+   && isprint(UChar(ch)));
     break;
 }

Index: test/filter.c
Prereq:  1.38
--- ncurses-6.5-20240928+/test/filter.c 2022-12-04 00:40:11.000000000 +0000
+++ ncurses-6.5-20241006/test/filter.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2020,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 1998-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@
```

```
 -30,7 +30,7 @@
/*
 * Author:  Thomas E. Dickey 1998
 *
- * $Id: filter.c,v 1.38 2022/12/04 00:40:11 tom Exp $
+ * $Id: filter.c,v 1.39 2024/10/05 19:26:24 tom Exp $
 *
 * An example of the 'filter()' function in ncurses, this program prompts
 * for commands and executes them (like a command shell).  It illustrates
@@ -65,7 +65,7 @@
   if (clocked) {
 if (limit >= 3) {
    time_t now = time((time_t *) 0);
-    struct tm *my = localtime(&now);
+    const struct tm *my = localtime(&now);
    char buffer[80];
    int skip, y, x;
    int margin;
Index: test/form_driver_w.c
Prereq:  1.17
--- ncurses-6.5-20240928+/test/form_driver_w.c 2022-12-10 23:31:31.000000000 +0000
+++ ncurses-6.5-20241006/test/form_driver_w.c 2024-10-06 23:13:40.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020,2022 Thomas E. Dickey                                     *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2013-2014,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -32,7 +32,7 @@
 ****************************************************************************/

/*
- * $Id: form_driver_w.c,v 1.17 2022/12/10 23:31:31 tom Exp $
+ * $Id: form_driver_w.c,v 1.18 2024/10/06 23:13:40 tom Exp $
 *
 * Test form_driver_w (int, int, wchar_t), a wide char aware
 * replacement of form_driver.
@@ -68,7 +68,7 @@
int
main(int argc, char *argv[])
{
-   static const char *help[] =
+   static NCURSES_CONST char *help[] =
   {
 "Commands:",
 "  ^D,^Q,ESC          - quit program",
```

```
Index: test/gdc.c
Prereq:  1.60
--- ncurses-6.5-20240928+/test/gdc.c 2024-06-29 19:59:06.000000000 +0000
+++ ncurses-6.5-20241006/test/gdc.c 2024-10-06 20:08:59.000000000 +0000
@@ -34,7 +34,7 @@
 * modified 10-18-89
 for curses (jrl)
 * 10-18-89 added signal handling
 *
- * $Id: gdc.c,v 1.60 2024/06/29 19:59:06 tom Exp $
+ * $Id: gdc.c,v 1.62 2024/10/06 20:08:59 tom Exp $
 */

#include <test.priv.h>
@@ -181,7 +181,7 @@
    int check;
    time_t result;
    char c = 0;
-    struct tm *tm;
+    NCURSES_CONST struct tm *tm;

    switch (sscanf(value, "%d:%d:%d%c", &hh, &mm, &ss, &c)) {
    default:
@@ -243,7 +243,7 @@
main(int argc, char *argv[])
{
    time_t now;
-    struct tm *tm;
+    NCURSES_CONST struct tm *tm;
    long t, a;
    int i, j, s, k, ch;
    int count = 0;
@@ -293,7 +293,7 @@

    InitAndCatch({
 if (redirected) {
-     char *name = getenv("TERM");
+     NCURSES_CONST char *name = getenv("TERM");
     if (name == 0
  || newterm(name, ofp, ifp) == 0) {
  fprintf(stderr, "cannot open terminal\n");
@@ -431,7 +431,7 @@
     _nc_STRNCPY(buf, ctime(&now), (size_t) 30);
     {
  char *d2 = buf + 10;
-  char *s2 = buf + 19;
+  NCURSES_CONST char *s2 = buf + 19;
```

```
  while ((*d2++ = *s2++) != '\0') ;
    }
    MvAddStr(16, 30, buf);
Index: test/inch_wide.c
Prereq:  1.13
--- ncurses-6.5-20240928+/test/inch_wide.c 2022-12-10 23:55:34.000000000 +0000
+++ ncurses-6.5-20241006/test/inch_wide.c 2024-10-06 23:14:31.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2020,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 2007-2010,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: inch_wide.c,v 1.13 2022/12/10 23:55:34 tom Exp $
+
 * $Id: inch_wide.c,v 1.14 2024/10/06 23:14:31 tom Exp $
 */
/*
      int in_wch(cchar_t *wcval);
@@ -61,7 +61,7 @@
static int
test_inchs(int level, char **argv, WINDOW *chrwin, WINDOW *strwin)
{
-    static const char *help[] =
+    static NCURSES_CONST char *help[] =
    {
 "Test input from screen using inch(), etc., in a moveable viewport.",
 "",
Index: test/inchs.c
Prereq:  1.19
--- ncurses-6.5-20240928+/test/inchs.c 2022-12-11 00:01:39.000000000 +0000
+++ ncurses-6.5-20241006/test/inchs.c 2024-10-06 21:17:54.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2020,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 2007-2012,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of
 charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
```

```
/*
- * $Id: inchs.c,v 1.19 2022/12/11 00:01:39 tom Exp $
+ * $Id: inchs.c,v 1.20 2024/10/06 21:17:54 tom Exp $
 *
 * Author: Thomas E Dickey
 */
@@ -71,7 +71,7 @@
static int
test_inchs(int level, char **argv, WINDOW *chrwin, WINDOW *strwin)
{
-    static const char *help[] =
+    static NCURSES_CONST char *help[] =
    {
 "Test input from screen using inch(), etc., in a moveable viewport.",
 "",
Index: test/ins_wide.c
Prereq:  1.30
--- ncurses-6.5-20240928+/test/ins_wide.c 2022-12-10 22:28:50.000000000 +0000
+++ ncurses-6.5-20241006/test/ins_wide.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020,2022 Thomas E. Dickey                                     *
+ * Copyright
 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2002-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: ins_wide.c,v 1.30 2022/12/10 22:28:50 tom Exp $
+ * $Id: ins_wide.c,v 1.31 2024/10/05 19:26:24 tom Exp $
 *
 * Demonstrate the wins_wstr() and wins_wch functions.
 * Thomas Dickey - 2002/11/23
@@ -73,7 +73,7 @@
static int n_opt = -1;

static void
-legend(WINDOW *win, int level, Options state, wchar_t *buffer, int length)
+legend(WINDOW *win, int level, Options state, const wchar_t *buffer, int length)
{
    const char *showstate;

Index: test/insdelln.c
Prereq:  1.15
--- ncurses-6.5-20240928+/test/insdelln.c 2022-12-10
```

```
 23:31:31.000000000 +0000
+++ ncurses-6.5-20241006/test/insdelln.c 2024-10-06 21:08:52.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2020,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 2008-2014,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: insdelln.c,v 1.15 2022/12/10 23:31:31 tom Exp $
+ * $Id: insdelln.c,v 1.17 2024/10/06 21:08:52 tom Exp $
 *
 * test-driver for deleteln, wdeleteln, insdelln, winsdelln, insertln, winsertln
  */
@@ -160,7 +160,7 @@
}

static void
-do_subwindow(WINDOW *win, STATUS * sp, void func(WINDOW *))
+do_subwindow(WINDOW *win, const STATUS * sp, void func(WINDOW *))
{
   WINDOW *win1 = newwin(sp->y_max - 2, sp->x_max - 2,
    sp->y_beg + 1, sp->x_beg + 1);
@@ -204,7 +204,7 @@
static void
show_help(WINDOW *win)
{
-    static const char *table[] =
+    static NCURSES_CONST char *table[] =
   {
 "Basic commands:"
 ,"Use h/j/k/l or arrow keys to move the cursor."
Index: test/inserts.c
Prereq:  1.34
--- ncurses-6.5-20240928+/test/inserts.c 2022-12-10 22:28:50.000000000 +0000
+++ ncurses-6.5-20241006/test/inserts.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020,2022 Thomas E. Dickey                                     *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2002-2016,2017 Free Software Foundation, Inc.
      *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
```

```
@@ -27,7 +27,7 @@
 * authorization.                                            *
 ****************************************************************************/
/*
- * $Id: inserts.c,v 1.34 2022/12/10 22:28:50 tom Exp $
+ * $Id: inserts.c,v 1.35 2024/10/05 19:26:24 tom Exp $
 *
 * Demonstrate the winsstr() and winsch functions.
 * Thomas Dickey - 2002/10/19
@@ -98,7 +98,7 @@
}

static int
-ColOf(char *buffer, int length, int margin)
+ColOf(const char *buffer, int length, int margin)
{
   int n;
   int result;
Index: test/knight.c
Prereq:  1.52
--- ncurses-6.5-20240928+/test/knight.c 2022-12-04 00:40:11.000000000 +0000
+++ ncurses-6.5-20241006/test/knight.c 2024-10-05 19:38:58.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright
 2018-2021,2022 Thomas E. Dickey                             *
+ * Copyright 2018-2022,2024 Thomas E. Dickey                             *
 * Copyright 1998-2013,2017 Free Software Foundation, Inc.                *
 *                                                                        *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -34,7 +34,7 @@
 * Eric S. Raymond <esr@snark.thyrsus.com> July 22 1995.  Mouse support
 * added September 20th 1995.
 *
- * $Id: knight.c,v 1.52 2022/12/04 00:40:11 tom Exp $
+ * $Id: knight.c,v 1.53 2024/10/05 19:38:58 tom Exp $
 */

#include <test.priv.h>
@@ -450,7 +450,8 @@
}

static bool
-evaluate_move(SQUARES squares, HISTORY * doneData, int doneSize, int row, int column)
+evaluate_move(SQUARES squares, const HISTORY * doneData, int doneSize,
+       int row, int column)
{
   if (doneSize <= 1)
```

```
 return (TRUE);
Index: test/list_keys.c
Prereq:  1.33
--- ncurses-6.5-20240928+/test/list_keys.c 2023-11-11
 00:35:05.000000000 +0000
+++ ncurses-6.5-20241006/test/list_keys.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2018-2023,2024 Thomas E. Dickey                                *
 * Copyright 2016,2017 Free Software Foundation, Inc.                       *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: list_keys.c,v 1.33 2023/11/11 00:35:05 tom Exp $
+ * $Id: list_keys.c,v 1.34 2024/10/05 19:26:24 tom Exp $
 *
 * Author: Thomas E Dickey
 *
@@ -297,7 +297,7 @@
#if NCURSES_XNAMES
   if (x_opt) {
  for (k = 0; k < count; ++k) {
-     TERMTYPE *term;
+     const TERMTYPE *term;
     set_curterm(terms[k]);
     term = (TERMTYPE *) cur_term;
     total += (size_t) (NUM_STRINGS(term) - STRCOUNT);
@@ -348,7 +348,7 @@
 widths1 = (int) strlen(modifier);

   for (k = 0; k < count; ++k) {
- char *value;
+ const char *value;
 set_curterm(terms[k]);
 if ((value = termname()) == NULL)
     failed("termname");
Index: test/move_field.c
Prereq:  1.16
--- ncurses-6.5-20240928+/test/move_field.c 2024-06-29 17:45:02.000000000 +0000
+++ ncurses-6.5-20241006/test/move_field.c 2024-10-06 21:12:35.000000000 +0000
@@ -26,7 +26,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
```

```
- * $Id: move_field.c,v 1.16 2024/06/29 17:45:02 tom Exp $
+ * $Id: move_field.c,v 1.19 2024/10/06 21:12:35 tom Exp $
 *
 * Demonstrate move_field().
 */
@@ -146,27 +146,27 @@
}

static FieldAttrs
 *
-my_field_attrs(FIELD *f)
+my_field_attrs(NCURSES_CONST FIELD *f)
{
   return (FieldAttrs *) field_userptr(f);
}

static int
-buffer_length(FIELD *f)
+buffer_length(NCURSES_CONST FIELD *f)
{
   return my_field_attrs(f)->row_lengths[0];
}

static void
-set_buffer_length(FIELD *f, int length)
+set_buffer_length(NCURSES_CONST FIELD *f, int length)
{
   my_field_attrs(f)->row_lengths[0] = length;
}

static int
-offset_in_field(FORM *form)
+offset_in_field(NCURSES_CONST FORM *form)
{
-    FIELD *field = current_field(form);
+    NCURSES_CONST FIELD *field = current_field(form);
   int currow, curcol;

   form_getyx(form, currow, curcol);
@@ -245,7 +245,7 @@

 default:
    modified = (ch < MIN_FORM_COMMAND
-   && isprint(ch));
+   && isprint(UChar(ch)));
    break;
 }
```

```
@@ -275,9 +275,9 @@

/* display a status message to show what's happening */
static void
-show_status(FORM *form, FIELD *field)
+show_status(NCURSES_CONST FORM *form, NCURSES_CONST FIELD
 *field)
{
-    WINDOW *sub = form_sub(form);
+    NCURSES_CONST WINDOW *sub = form_sub(form);
    int currow, curcol;

    getyx(stdscr, currow, curcol);
Index: test/movewindow.c
Prereq:  1.54
--- ncurses-6.5-20240928+/test/movewindow.c 2023-05-27 20:13:10.000000000 +0000
+++ ncurses-6.5-20241006/test/movewindow.c 2024-10-06 18:44:26.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2018-2023,2024 Thomas E. Dickey                                *
 * Copyright 2006-2013,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
 /*
- * $Id: movewindow.c,v 1.54 2023/05/27 20:13:10 tom Exp $
+ * $Id: movewindow.c,v 1.56 2024/10/06 18:44:26 tom Exp $
 *
 * Demonstrate move functions for windows and derived windows from the curses
 * library.
@@ -135,7 +135,7 @@
 */
static PAIR *
selectcell(WINDOW *parent,
-    WINDOW *child,
+    NCURSES_CONST WINDOW *child,
    int uli, int ulj,
    int lri, int lrj,
    bool relative,
@@ -252,7 +252,7 @@
    int max_col = (parent == stdscr) ? COL_MAX : getmaxx(parent);
    int min_line = (parent == stdscr) ? LINE_MIN : 0;
    int max_line = (parent == stdscr) ? LINE_MAX : getmaxy(parent);
-    PAIR *tmp;
+    NCURSES_CONST PAIR *tmp;
```

```
   bool result = FALSE;

   head_line("Use arrows to move cursor, anything else to mark corner 1");
@@ -346,7 +346,7 @@
}

static WINDOW *
-parent_of(WINDOW *win)
+parent_of(NCURSES_CONST WINDOW *win)
{
   WINDOW *result = 0;
   int n = window2num(win);
@@ -435,7 +435,7 @@
 int max_col = top ? COL_MAX
 : getmaxx(parent);
 int min_line = top ? LINE_MIN : 0;
 int max_line = top ? LINE_MAX : getmaxy(parent);
- PAIR *tmp;
+ NCURSES_CONST PAIR *tmp;
 bool more;

 head_line("Select new position for %swindow", top ? "" : "sub");
@@ -474,7 +474,7 @@
}

static void
-show_derwin(WINDOW *win)
+show_derwin(NCURSES_CONST WINDOW *win)
{
   int pary, parx, maxy, maxx;

@@ -500,7 +500,7 @@
 int max_col = top ? COL_MAX : getmaxx(parent);
 int min_line = top ? LINE_MIN : 0;
 int max_line = top ? LINE_MAX : getmaxy(parent);
- PAIR *tmp;
+ NCURSES_CONST PAIR *tmp;
 bool more;

 show_derwin(win);
Index: test/ncurses.c
Prereq:  1.538
--- ncurses-6.5-20240928+/test/ncurses.c 2023-11-11 01:23:59.000000000 +0000
+++ ncurses-6.5-20241006/test/ncurses.c 2024-10-06 20:18:59.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2018-2023,2024
```

```
 Thomas E. Dickey                                *
 * Copyright 1998-2016,2017 Free Software Foundation, Inc.                *
 *                                                                        *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -41,7 +41,7 @@
   Author: Eric S. Raymond <esr@snark.thyrsus.com> 1993
           Thomas E. Dickey (beginning revision 1.27 in 1996).

-$Id: ncurses.c,v 1.538 2023/11/11 01:23:59 tom Exp $
+$Id: ncurses.c,v 1.541 2024/10/06 20:18:59 tom Exp $

****************************************************************************/

@@ -273,7 +273,7 @@
     ++x;
     break;
 default:
-    if (!isprint(ch) || ch >= KEY_MIN) {
+    if (!isprint(UChar(ch)) || ch >= KEY_MIN) {
  beep();
     } else if ((int) strlen(buffer) < limit) {
  int j;
@@ -928,7 +928,7 @@
  /* at least Solaris SVR4 curses breaks unctrl(128), etc. */
  c2 &= 0x7f;
 #endif
-  if (isprint(c))
+  if (isprint(UChar(c)))
      (void)
  wprintw(win, "%c", UChar(c));
  else if (c2 != UChar(c))
     (void) wprintw(win, "M-%s", unctrl(c2));
@@ -1693,7 +1693,7 @@
     chtype extras = (chtype) ac;

     if (UseColors) {
-  NCURSES_PAIRS_T pair = 0;
+  NCURSES_PAIRS_T pair;
  if ((fg != COLOR_BLACK) || (bg != COLOR_BLACK)) {
      pair = 1;
      if (init_pair(pair, fg, bg) == ERR) {
@@ -2345,7 +2345,6 @@
 for (i = (NCURSES_PAIRS_T) (base_row * per_row); i < pairs_max; i++) {
     int row = grid_top + (i / per_row) - base_row;
     int col = (i % per_row + 1) * width;
-    NCURSES_PAIRS_T pair = i;

     if ((i / per_row) > row_limit)
```

```
  break;
@@ -2355,6 +2354,7 @@
     if (row >= 0 && move(row, col) != ERR) {
  NCURSES_COLOR_T fg = (NCURSES_COLOR_T) InxToFG(i);
  NCURSES_COLOR_T bg = (NCURSES_COLOR_T) InxToBG(i);
+  NCURSES_PAIRS_T pair = i;

  init_pair(pair, fg, bg);
  attron(COLOR_PAIR(pair));
@@ -2517,7 +2517,7 @@
static int
x_color_test(bool recur GCC_UNUSED)
{
-    long i;
+    int i;

 int top = 0, width;
    int base_row = 0;
    int grid_top = top + 3;
@@ -2613,17 +2613,17 @@
 /* show color names/numbers across the top */
 for (i = 0; i < per_row; i++) {
     show_color_name(top + 2,
-       ((int) i + 1) * width,
-       (int) i * zoom_size + MinColors,
+       (i + 1) * width,
+       i * zoom_size + MinColors,
        opt_wide,
        opt_zoom);
 }

 /* show a grid of colors, with color names/ numbers on the left */
 for (i = (base_row * per_row); i < pairs_max; i++) {
-     int row = grid_top + ((int) i / per_row) - base_row;
-     int col = ((int) i % per_row + 1) * width;
-     int pair = (int) i;
+     int row = grid_top + (i / per_row) - base_row;
+     int col = (i % per_row + 1) * width;
+     int pair = i;

     if ((i / per_row) > row_limit)
  break;
@@ -2828,7 +2828,7 @@
#define DecodeRGB(n) (NCURSES_COLOR_T) ((n * 1000) / 0xffff)

static void
-init_all_colors(bool xterm_colors, char *palette_file)
+init_all_colors(bool xterm_colors, NCURSES_CONST
```

```
 char *palette_file)
{
   NCURSES_PAIRS_T cp;
   all_colors = typeMalloc(RGB_DATA, (unsigned) MaxColors);
@@ -3317,7 +3317,7 @@
{
   int c, fmt = 1;
   char buf[9];
-   char *s;
+   NCURSES_CONST char *s;
   attr_t attr = A_NORMAL;
   unsigned at_code = 0;
#if HAVE_SLK_COLOR
@@ -3938,8 +3938,7 @@

   *dst = *src;
   do {
- int count;
- TEST_CCHAR(src, count, {
+ TEST_CCHAR(src, {
     attr |= (test_attrs & A_ALTCHARSET);
     setcchar(dst, test_wch, attr, pair, NULL);
 }, {
@@ -4810,7 +4809,8 @@
/* Ask user for a window definition */
{
   WINDOW *rwindow;
-   pair ul, lr, *tmp;
+   pair ul, lr;
+   NCURSES_CONST pair *tmp;

   move(0, 0);
   clrtoeol();
@@ -5014,7 +5014,8 @@
#if HAVE_WRESIZE
 case CTRL('X'): /* resize window */
    if (current) {
-  pair *tmp, ul, lr;
+  NCURSES_CONST pair *tmp;
+  pair ul, lr;
  int mx, my;

  move(0, 0);
@@ -5249,7 +5250,7 @@
}

static void
-fill_panel(PANEL *pan)
```

```
+fill_panel(NCURSES_CONST PANEL
 *pan)
{
   WINDOW *win = panel_window(pan);
   const char *userptr = (const char *) panel_userptr(pan);
@@ -5286,7 +5287,7 @@
}

static void
-fill_wide_panel(PANEL *pan)
+fill_wide_panel(NCURSES_CONST PANEL *pan)
{
   WINDOW *win = panel_window(pan);
   const char *userptr = (const char *) panel_userptr(pan);
@@ -5336,7 +5337,7 @@
}

static int
-demo_panels(void (*InitPanel) (WINDOW *), void (*FillPanel) (PANEL *))
+demo_panels(void (*InitPanel) (WINDOW *), void (*FillPanel) (NCURSES_CONST PANEL *))
{
   int count;
   int itmp;
@@ -6246,7 +6247,8 @@
run_trace_menu(MENU * m)
{
   ITEM **items;
-   ITEM *i, **p;
+    NCURSES_CONST ITEM *i;
+    ITEM **p;

   for (;;) {
 bool changed = FALSE;
@@ -6424,7 +6426,7 @@

   if (field_info(me, &rows, &cols, &frow, &fcol, &nrow, &nbuf) == E_OK
 && nbuf > 0) {
- char *source = field_buffer(me, 1);
+ NCURSES_CONST char *source = field_buffer(me, 1);
 size_t have = (source ? strlen(source) : 0) + 1;
 size_t need
 = 80 + have;
 char *temp = malloc(need);
@@ -6434,7 +6436,7 @@
     _nc_STRNCPY(temp, source ? source : "", have + 1);
     len = (size_t) (char *) field_userptr(me);
     if (c <= KEY_MAX) {
-  if (isgraph(c) && (len + 1) < sizeof(temp)) {
```

```
+  if (isgraph(UChar(c)) && (len + 1) < sizeof(temp)) {
      temp[len++] = (char) c;
      temp[len] = 0;
      set_field_buffer(me, 1, temp);
@@ -6484,7 +6486,7 @@
}

static int
-form_virtualize(FORM *f, WINDOW *w)
+form_virtualize(NCURSES_CONST FORM *f, WINDOW *w)
{
   /* *INDENT-OFF* */
   static const struct {
@@ -6658,7 +6660,7 @@
static
FIELDCHECK_CB(pw_field_check)
{
-    char *s = field_buffer(fld, 0);
+    NCURSES_CONST char *s = field_buffer(fld, 0);
   int n;

   for (n = 0; s[n] != '\0'; ++n) {
@@ -6680,7 +6682,8 @@
form_test(bool recur GCC_UNUSED)
{
   FORM *form;
-    FIELD *f[12], *secure;
+    FIELD *f[12];
+    NCURSES_CONST FIELD *secure;
   FIELDTYPE *fty_middle = new_fieldtype(mi_field_check, mi_char_check);
    FIELDTYPE *fty_passwd = new_fieldtype(pw_field_check, pw_char_check);
   int c;
@@ -7176,7 +7179,7 @@
}

static void
-overlap_test_4(int flavor, WINDOW *a, WINDOW *b)
+overlap_test_4(int flavor, NCURSES_CONST WINDOW *a, WINDOW *b)
{
   switch ((otCOPY) flavor) {
   case otCOPY_overwrite:
@@ -7899,7 +7902,7 @@
   bool monochrome = FALSE;
#if HAVE_COLOR_CONTENT
   bool xterm_colors = FALSE;
-    char *palette_file = 0;
+    NCURSES_CONST char *palette_file = 0;
#endif
```

```
   setlocale(LC_ALL, "");
Index: test/padview.c
Prereq:  1.22
--- ncurses-6.5-20240928+/test/padview.c 2022-12-04 00:40:11.000000000 +0000
+++ ncurses-6.5-20241006/test/padview.c 2024-10-06 21:08:25.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 2017 Free
 Software Foundation, Inc.                         *
 *                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -29,7 +29,7 @@
/*
 * clone of view.c, using pads
 *
- * $Id: padview.c,v 1.22 2022/12/04 00:40:11 tom Exp $
+ * $Id: padview.c,v 1.24 2024/10/06 21:08:25 tom Exp $
 */

#include <test.priv.h>
@@ -182,7 +182,7 @@

#if USE_WIDEC_SUPPORT
   if (!memcmp("\357\273\277", my_blob, 3)) {
- char *s = my_blob + 3;
+ const char *s = my_blob + 3;
 char *d = my_blob;
 Trace(("trim BOM"));
 do {
@@ -213,7 +213,7 @@
   for (k = 0; my_vec[k]; ++k) {
 char *s;
#if USE_WIDEC_SUPPORT
- char *last = my_vec[k] + (int) strlen(my_vec[k]);
+ const char *last = my_vec[k] + (int) strlen(my_vec[k]);
 wchar_t wch[2];
 size_t rc;
#ifndef state_unused
@@ -279,7 +279,7 @@
int
main(int argc, char *argv[])
{
-   static const char *help[] =
+   static NCURSES_CONST char *help[] =
```

```
   {
 "Commands:",
 "  q,^Q,ESC       - quit this program",
@@ -532,7 +532,7 @@
    beep();
    break;
 }
- if (c >= KEY_MIN || (c > 0 && !isdigit(c))) {
+ if (c >= KEY_MIN || (c > 0 && !isdigit(UChar(c)))) {
    got_number = FALSE;
    value = 0;
 }
Index: test/parse_rgb.h
Prereq:  1.5
--- ncurses-6.5-20240928+/test/parse_rgb.h 2020-02-02 23:34:34.000000000 +0000
+++ ncurses-6.5-20241006/test/parse_rgb.h 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018,2020 Thomas E. Dickey                                     *
+ * Copyright 2018-2020,2024 Thomas E. Dickey                                *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
 * copy of this software and associated documentation files (the            *
@@ -26,7 +26,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: parse_rgb.h,v 1.5 2020/02/02 23:34:34 tom Exp $
+ * $Id: parse_rgb.h,v 1.6 2024/10/05 19:26:24 tom Exp $
 *
 * Sample implementation of ncurses RGB extension from user_caps(5).
 */
@@ -49,7 +49,7 @@
 int bits;
 int pwr2;
 int r = 0, g = 0, b = 0;
- char *data;
+ const char *data;
 char ch;

 for (max_bits = 0, pwr2 = 1;
Index: test/picsmap.c
Prereq:  1.149
--- ncurses-6.5-20240928+/test/picsmap.c 2023-04-23 23:20:37.000000000 +0000
+++ ncurses-6.5-20241006/test/picsmap.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
```

```
- * Copyright 2018-2022,2023 Thomas E. Dickey                           *
+ * Copyright 2018-2023,2024 Thomas E. Dickey                           *
 * Copyright 2017,2018 Free Software Foundation, Inc.                   *
 *                                                                      *
                                                                        *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                       *
 ************************************************************************/
/*
- * $Id: picsmap.c,v 1.149 2023/04/23 23:20:37 tom Exp $
+ * $Id: picsmap.c,v 1.150 2024/10/05 19:26:24 tom Exp $
 *
 * Author: Thomas E. Dickey
 *
@@ -574,7 +574,7 @@
    _nc_STRCAT(full_name, filename, need);
    if (tries & 4) {
  char *t = s;
-  char *tc;
+  const char *tc;
  int num;
  char chr;
  int found = 0;
@@ -1374,8 +1374,8 @@
  int r, g, b, nocolor;
  float rf, gf, bf;
  unsigned check;
-  char *t;
-  char *s = t = strchr(buffer, '#');
+  char *s = strchr(buffer, '#');
+  const char *t = s;
  bool matched = FALSE;

  if (s != 0) {
@@ -1492,7 +1492,7 @@
#define fg_color(pics,n) (pics->fgcol[n].fgcol)

static void
-dump_picture(PICS_HEAD
- * pics)
+dump_picture(const PICS_HEAD * pics)
{
   int y, x;

@@ -1767,7 +1767,7 @@
#if USE_EXTENDED_COLORS
 case 'x':
```

```
    {
-  char *s = optarg;
+  const char *s = optarg;
  while (*s) {
     switch (*s++) {
     case 'p':
Index: test/popup_msg.c
Prereq:  1.12
--- ncurses-6.5-20240928+/test/popup_msg.c 2024-06-29 18:34:58.000000000 +0000
+++ ncurses-6.5-20241006/test/popup_msg.c 2024-10-06 21:07:01.000000000 +0000
@@ -27,7 +27,7 @@
 * authorization.                                        *
 ****************************************************************************/
/*
- * $Id: popup_msg.c,v 1.12 2024/06/29 18:34:58 tom Exp $
+ * $Id: popup_msg.c,v 1.13 2024/10/06 21:07:01 tom Exp $
 *
 * Show a multi-line message in a window which may extend beyond the screen.
 *
@@ -62,7 +62,7 @@
 * Display a temporary window, e.g., to display a help-message.
 */
void
-popup_msg(WINDOW *parent, const char *const *msg)
+popup_msg(WINDOW *parent, NCURSES_CONST
 char *const *msg)
{
   int x0 = 4;
   int y0 = 2;
@@ -171,12 +171,12 @@
void
popup_msg2(WINDOW *parent, char **msg)
{
-    popup_msg(parent, (const char *const *) msg);
+    popup_msg(parent, (NCURSES_CONST char *const *) msg);
}

#else
void
-popup_msg(WINDOW *parent, const char *const *msg)
+popup_msg(WINDOW *parent, NCURSES_CONST char *const *msg)
{
   (void) parent;
   (void) msg;
Index: test/popup_msg.h
Prereq:  1.5
--- ncurses-6.5-20240928+/test/popup_msg.h 2020-02-02 23:34:34.000000000 +0000
+++ ncurses-6.5-20241006/test/popup_msg.h 2024-10-06 21:17:54.000000000 +0000
```

```
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018,2020 Thomas E. Dickey                                     *
+ * Copyright 2018-2020,2024 Thomas E. Dickey                                *
 * Copyright 2017 Free Software Foundation, Inc.                            *
 *                                                                          *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: popup_msg.h,v 1.5 2020/02/02 23:34:34 tom Exp $
+ * $Id: popup_msg.h,v 1.6 2024/10/06 21:17:54 tom Exp $
 *
 * Utility functions for a popup-message or help-screen.
 */
@@ -37,7 +37,7 @@

#include <test.priv.h>

-extern void popup_msg(WINDOW *parent, const char *const *msg);
+extern void popup_msg(WINDOW *parent, NCURSES_CONST char *const *msg);
extern void popup_msg2(WINDOW *parent, char **msg);

#endif /* POPUP_MSG_H_incl */
Index: test/railroad.c
Prereq:  1.26
--- ncurses-6.5-20240928+/test/railroad.c 2022-12-11 00:12:13.000000000 +0000
+++ ncurses-6.5-20241006/test/railroad.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2019-2020,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 2000-2013,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -30,7 +30,7 @@
/*
 * Author: Thomas E. Dickey - 2000
 *
- * $Id: railroad.c,v 1.26 2022/12/11 00:12:13 tom Exp $
+ * $Id: railroad.c,v 1.27 2024/10/05 19:26:24 tom Exp $
 *
 * A simple demo of the termcap interface.
 */
@@ -113,7 +113,7 @@
```

```
static void
ShowSign(char *string)
{
-    char *base = string;
+    const char *base = string;
    int first, last;

    if (moveit != 0) {
Index: test/rain.c
Prereq:  1.58
--- ncurses-6.5-20240928+/test/rain.c 2024-08-31 15:56:10.000000000 +0000
+++ ncurses-6.5-20241006/test/rain.c 2024-10-06 21:09:00.000000000 +0000
@@ -27,7 +27,7
 @@
 * authorization.                                        *
 ********************************************************************************/
/*
- * $Id: rain.c,v 1.58 2024/08/31 15:56:10 tom Exp $
+ * $Id: rain.c,v 1.62 2024/10/06 21:09:00 tom Exp $
 */
#include <test.priv.h>
#include <popup_msg.h>
@@ -45,7 +45,7 @@

struct DATA;

-typedef void (*DrawPart) (struct DATA *);
+typedef void (*DrawPart) (const struct DATA *);

typedef struct DATA {
    int y, x;
@@ -118,25 +118,25 @@
}

static void
-part1(DATA * drop)
+part1(const DATA * drop)
{
    MvAddCh(drop->y, drop->x, '.');
}

static void
-part2(DATA * drop)
+part2(const DATA * drop)
{
    MvAddCh(drop->y, drop->x, 'o');
}
```

```
static void
-part3(DATA * drop)
+part3(const DATA * drop)
{
   MvAddCh(drop->y, drop->x, 'O');
}

static void
-part4(DATA * drop)
+part4(const DATA * drop)
{
   MvAddCh(drop->y - 1, drop->x, '-');
   MvAddStr(drop->y, drop->x - 1, "|.|");
@@ -144,7 +144,7 @@
 }

static void
-part5(DATA * drop)
+part5(const DATA * drop)
{
   MvAddCh(drop->y - 2, drop->x, '-');
   MvAddStr(drop->y - 1, drop->x - 1, "/ \\");
@@ -154,7 +154,7 @@
}

static void
-part6(DATA * drop)
+part6(const DATA * drop)
{
   MvAddCh(drop->y - 2, drop->x, ' ');
   MvAddStr(drop->y - 1, drop->x - 1, "   ");
@@ -186,7 +186,7 @@
}

static void
-draw_part(void (*func) (DATA *), int state, DATA * data)
+draw_part(void (*func) (const DATA *), int state, DATA * data)
{
   data->func = func;
   data->state = state;
@@ -328,7 +328,7 @@
int
main(int argc, char *argv[])
{
-   static const char *help[] =
+   static NCURSES_CONST char *help[] =
   {
 "Commands:",
```

```
 " q/Q        exit the program",
Index: test/redraw.c
Prereq:  1.17
--- ncurses-6.5-20240928+/test/redraw.c 2022-12-10 22:28:50.000000000 +0000
+++ ncurses-6.5-20241006/test/redraw.c 2024-10-06 21:17:54.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2020-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2006-2012,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: redraw.c,v 1.17 2022/12/10 22:28:50 tom Exp $
+ * $Id: redraw.c,v 1.18 2024/10/06 21:17:54 tom Exp $
 *
 * Demonstrate the redrawwin() and wredrawln() functions.
 * Thomas Dickey - 2006/11/4
@@ -61,7 +61,7 @@
static void
test_redraw(WINDOW *win)
{
-    static const char *help[] =
+    static NCURSES_CONST char *help[] =
    {
 "Commands:",
 "  ^Q/ESC/q   - quit",
Index: test/savescreen.c
Prereq:
  1.62
--- ncurses-6.5-20240928+/test/savescreen.c 2022-12-10 23:23:27.000000000 +0000
+++ ncurses-6.5-20241006/test/savescreen.c 2024-10-06 21:10:09.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2018-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2018-2022,2024 Thomas E. Dickey                                *
 * Copyright 2006-2017,2018 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: savescreen.c,v 1.62 2022/12/10 23:23:27 tom Exp $
```

```
+ * $Id: savescreen.c,v 1.65 2024/10/06 21:10:09 tom Exp $
 *
 * Demonstrate save/restore functions
 from the curses library.
 * Thomas Dickey - 2007/7/14
@@ -96,7 +96,7 @@
}

static int
-load_screen(char *filename)
+load_screen(NCURSES_CONST char *filename)
{
   int result;

@@ -170,7 +170,7 @@
#if USE_WIDEC_SUPPORT
   cchar_t mycc;
#endif
-    char *filename = files[which];
+    NCURSES_CONST char *filename = files[which];
   bool dumped = FALSE;

   if (filename != 0) {
@@ -216,7 +216,7 @@
static void
editor_help(void)
{
-    static const char *msgs[] =
+    static NCURSES_CONST char *msgs[] =
   {
 "You are now in the screen-editor, which allows you to make some",
 "lines on the screen, as well as save copies of the screen to a",
@@ -238,7 +238,7 @@
static void
replay_help(void)
{
-    static const char *msgs[] =
+    static NCURSES_CONST char *msgs[] =
   {
 "You are now in the screen-loader, which allows you to view",
 "the dumped/restored screens.",
@@ -286,7 +286,7 @@
   bool replaying = FALSE;
   bool done = FALSE;
   char **files;
-
   char *fill_by = 0;
+    NCURSES_CONST char *fill_by = 0;
```

```
#if USE_WIDEC_SUPPORT
   cchar_t mycc;
   static const wchar_t mywc[2] =
Index: test/tclock.c
Prereq:  1.48
--- ncurses-6.5-20240928+/test/tclock.c 2023-02-25 16:42:22.000000000 +0000
+++ ncurses-6.5-20241006/test/tclock.c 2024-10-05 18:47:56.000000000 +0000
@@ -1,4 +1,4 @@
-/* $Id: tclock.c,v 1.48 2023/02/25 16:42:22 tom Exp $ */
+/* $Id: tclock.c,v 1.49 2024/10/05 18:47:56 tom Exp $ */

#define NEED_TIME_H
#include <test.priv.h>
@@ -145,7 +145,7 @@
   int lastbeep = -1;
   bool odd = FALSE;
   time_t tim;
-   struct tm *t;
+    const struct tm *t;
   char szChar[20];
   char *text;
   short my_bg = COLOR_BLACK;
Index: test/test.priv.h
Prereq:  1.219
--- ncurses-6.5-20240928+/test/test.priv.h 2024-08-31 10:46:01.000000000 +0000
+++ ncurses-6.5-20241006/test/test.priv.h 2024-10-05 19:01:00.000000000 +0000
@@ -30,7 +30,7 @@
/******************************************************************************
 *  Author: Thomas E. Dickey                    1996-on                   *
 ******************************************************************************/
-/* $Id: test.priv.h,v 1.219 2024/08/31 10:46:01 Rafael.Kitover Exp $ */
+/* $Id: test.priv.h,v 1.220 2024/10/05 19:01:00 tom Exp $ */

#ifndef __TEST_PRIV_H
#define __TEST_PRIV_H 1
@@ -765,8 +765,8 @@

#define VERSION_COMMON() \
static char *version_common(char **argv) { \
- char *base = argv[0]; \
- char *part = strrchr(base, '/'); \
+ const char *base = argv[0]; \
+ const char *part = strrchr(base, '/'); \
 size_t need = strlen(base) + 80; \
 char *result = malloc(need); \
 if (result != NULL) { \
@@ -916,8 +916,8 @@
 * Workaround in case getcchar() returns a positive value when the source
```

```
 * string produces only a L'\0'.
 */
-#define TEST_CCHAR(s, count, then_stmt, else_stmt) \
- if ((count = getcchar(s, NULL, NULL, NULL, NULL)) > 0) { \
+#define TEST_CCHAR(s, then_stmt, else_stmt) \
+ if (getcchar(s, NULL, NULL,
 NULL, NULL) > 0) { \
     wchar_t test_wch[CCHARW_MAX + 2]; \
     attr_t test_attrs; \
     NCURSES_PAIRS_T test_pair; \
Index: test/test_add_wchstr.c
Prereq:  1.34
--- ncurses-6.5-20240928+/test/test_add_wchstr.c 2022-12-10 22:28:50.000000000 +0000
+++ ncurses-6.5-20241006/test/test_add_wchstr.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2009-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
 /*
- * $Id: test_add_wchstr.c,v 1.34 2022/12/10 22:28:50 tom Exp $
+ * $Id: test_add_wchstr.c,v 1.35 2024/10/05 19:26:24 tom Exp $
 *
 * Demonstrate the waddwchstr() and wadd_wch functions.
 * Thomas Dickey - 2009/9/12
@@ -158,7 +158,7 @@
}

static void
-legend(WINDOW *win, int level, Options state, wchar_t *buffer, int length)
+legend(WINDOW *win, int level, Options state, const wchar_t *buffer, int length)
{
   const char *showstate;

Index: test/test_addchstr.c
Prereq:  1.29
--- ncurses-6.5-20240928+/test/test_addchstr.c 2022-12-10 22:28:50.000000000 +0000
+++ ncurses-6.5-20241006/test/test_addchstr.c 2024-10-05 19:26:24.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020,2022 Thomas E. Dickey                                     *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2009-2016,2017 Free Software Foundation, Inc.                  *
```

```
 *                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                           *
 ****************************************************************************/
/*
- * $Id: test_addchstr.c,v 1.29 2022/12/10 22:28:50 tom Exp $
+ * $Id: test_addchstr.c,v 1.30 2024/10/05 19:26:24 tom Exp $
 *
 * Demonstrate the waddchstr() and waddch functions.
 * Thomas Dickey - 2009/9/12
@@ -169,7 +169,7 @@
}

static int
-ColOf(char *buffer, int length, int margin)
+ColOf(const char *buffer, int length, int margin)
{
   int n;
   int result;
Index: test/test_addstr.c
Prereq:  1.20
--- ncurses-6.5-20240928+/test/test_addstr.c 2022-12-10 22:28:50.000000000 +0000
+++ ncurses-6.5-20241006/test/test_addstr.c 2024-10-05 19:27:33.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2020,2022 Thomas E. Dickey                                     *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2009-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: test_addstr.c,v 1.20 2022/12/10 22:28:50 tom Exp $
+ * $Id: test_addstr.c,v 1.21 2024/10/05 19:27:33 tom Exp $
 *
 * Demonstrate the waddstr() and waddch functions.
 * Thomas Dickey - 2009/9/12
@@ -91,7 +91,7 @@
}

static int
-ColOf(char *buffer, int length, int margin)
+ColOf(const char *buffer, int length, int margin)
{
```

```
   int n;
   int result;
Index: test/test_addwstr.c
Prereq:  1.22
---
 ncurses-6.5-20240928+/test/test_addwstr.c 2023-05-27 20:13:10.000000000 +0000
+++ ncurses-6.5-20241006/test/test_addwstr.c 2024-10-05 19:27:33.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2020-2023,2024 Thomas E. Dickey                                *
 * Copyright 2009-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: test_addwstr.c,v 1.22 2023/05/27 20:13:10 tom Exp $
+ * $Id: test_addwstr.c,v 1.23 2024/10/05 19:27:33 tom Exp $
 *
 * Demonstrate the waddwstr() and wadd_wch
 functions.
 * Thomas Dickey - 2009/9/12
@@ -82,7 +82,7 @@
static int n_opt = -1;

static void
-legend(WINDOW *win, int level, Options state, wchar_t *buffer, int length)
+legend(WINDOW *win, int level, Options state, const wchar_t *buffer, int length)
{
   const char *showstate;

Index: test/test_endwin.c
Prereq:  1.2
--- ncurses-6.5-20240928+/test/test_endwin.c 2023-11-10 15:17:19.000000000 +0000
+++ ncurses-6.5-20241006/test/test_endwin.c 2024-10-05 19:27:33.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2023 Thomas E. Dickey                                          *
+ * Copyright 2023,2024 Thomas E. Dickey                                     *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
 * copy of this software and associated documentation files (the            *
@@ -26,7 +26,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
```

```
- * $Id: test_endwin.c,v 1.2 2023/11/10 15:17:19 tom Exp $
+ * $Id: test_endwin.c,v 1.3 2024/10/05 19:27:33 tom Exp $
 */
#include <test.priv.h>

@@ -67,7 +67,7 @@
    int rc_e1 = OK;
    int rc_e2 = OK;
    int rc_e3 = OK;
-    SCREEN *sp = NULL;
+    const SCREEN *sp = NULL;
    bool opt_e = FALSE;
    bool opt_i = FALSE;
    bool opt_n = FALSE;
Index: test/test_get_wstr.c
Prereq:  1.14
--- ncurses-6.5-20240928+/test/test_get_wstr.c 2022-12-10 23:59:13.000000000 +0000
+++ ncurses-6.5-20241006/test/test_get_wstr.c 2024-10-06 23:15:10.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020,2022 Thomas E. Dickey                                     *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2007-2011,2017
 Free Software Foundation, Inc.                   *
 *                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                           *
 ****************************************************************************/
/*
- * $Id: test_get_wstr.c,v 1.14 2022/12/10 23:59:13 tom Exp $
+ * $Id: test_get_wstr.c,v 1.16 2024/10/06 23:15:10 tom Exp $
 *
 * Author: Thomas E Dickey
 *
@@ -69,7 +69,7 @@
}

static int
-Remainder(WINDOW *txtwin)
+Remainder(const WINDOW *txtwin)
{
    int result = getmaxx(txtwin) - getcurx(txtwin);
    return (result > 0) ? result : 0;
@@ -138,7 +138,7 @@
static int
recursive_test(int level, char **argv, WINDOW *strwin)
{
```

```
-    static const char *help[] =
+    static NCURSES_CONST char *help[] =
     {
 "Commands:",
 "  q,^Q,ESC       - quit this program",
Index: test/test_getstr.c
Prereq:
  1.16
--- ncurses-6.5-20240928+/test/test_getstr.c 2022-12-10 23:58:37.000000000 +0000
+++ ncurses-6.5-20241006/test/test_getstr.c 2024-10-06 22:36:46.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020,2022 Thomas E. Dickey                                     *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2007-2012,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: test_getstr.c,v 1.16 2022/12/10 23:58:37 tom Exp $
+ * $Id: test_getstr.c,v 1.19 2024/10/06 22:36:46 tom Exp $
 *
 * Author: Thomas E Dickey
  *
@@ -76,7 +76,7 @@
}

static int
-Remainder(WINDOW *txtwin)
+Remainder(NCURSES_CONST WINDOW *txtwin)
{
    int result = getmaxx(txtwin) - getcurx(txtwin);
    return (result > 0) ? result : 0;
@@ -145,7 +145,7 @@
static int
recursive_test(int level, char **argv, WINDOW *strwin)
{
-    static const char *help[] =
+    static NCURSES_CONST char *help[] =
     {
 "Commands:",
 "  q,^Q,ESC       - quit this program",
Index: test/test_instr.c
Prereq:  1.13
--- ncurses-6.5-20240928+/test/test_instr.c 2024-06-29 18:42:53.000000000 +0000
+++ ncurses-6.5-20241006/test/test_instr.c 2024-10-06 21:11:54.000000000 +0000
```

```
@@ -27,7 +27,7 @@
 * authorization.                                          *
 ****************************************************************************/
/*
- * $Id: test_instr.c,v 1.13 2024/06/29 18:42:53 tom Exp $
+ * $Id: test_instr.c,v 1.15 2024/10/06 21:11:54 tom Exp $
 *
 * Author: Thomas E Dickey
 *
@@ -56,13 +56,13 @@
}

static
 void
-show_1st(WINDOW *win, int line, char *buffer)
+show_1st(WINDOW *win, int line, NCURSES_CONST char *buffer)
{
   MvWAddStr(win, line, 5, buffer);
}

static void
-showmore(WINDOW *win, int line, char *buffer)
+showmore(WINDOW *win, int line, NCURSES_CONST char *buffer)
{
   wmove(win, line, 0);
   wclrtoeol(win);
@@ -72,7 +72,7 @@
static void
show_help(WINDOW *win)
{
-    static const char *msgs[] =
+    static NCURSES_CONST char *msgs[] =
   {
 "Show file contents and a viewport from the variants of winstr."
 ,"Use h/j/k/l or arrow keys to move the viewport."
Index: test/test_inwstr.c
Prereq:  1.9
--- ncurses-6.5-20240928+/test/test_inwstr.c 2024-06-29 18:40:02.000000000 +0000
+++ ncurses-6.5-20241006/test/test_inwstr.c 2024-10-06 23:15:38.000000000 +0000
@@ -27,7 +27,7 @@
 * authorization.                                          *
 ****************************************************************************/
/*
- * $Id: test_inwstr.c,v
 1.9 2024/06/29 18:40:02 tom Exp $
+ * $Id: test_inwstr.c,v 1.11 2024/10/06 23:15:38 tom Exp $
 *
 * Author: Thomas E Dickey
```

```
 *
@@ -59,13 +59,13 @@
}

static void
-show_1st(WINDOW *win, int line, wchar_t *buffer)
+show_1st(WINDOW *win, int line, const wchar_t *buffer)
{
   (void) mvwaddwstr(win, line, 5, buffer);
}

static void
-showmore(WINDOW *win, int line, wchar_t *buffer)
+showmore(WINDOW *win, int line, const wchar_t *buffer)
{
   wmove(win, line, 0);
   wclrtoeol(win);
@@ -75,7 +75,7 @@
static void
show_help(WINDOW *win)
{
-    static const char *msgs[] =
+    static NCURSES_CONST char *msgs[] =
    {
 "Show file contents and a viewport from the variants of winwstr."
 ,"Use h/j/k/l or arrow keys to move the viewport."
Index: test/test_mouse.c
Prereq:  1.32
--- ncurses-6.5-20240928+/test/test_mouse.c 2024-08-31 10:46:01.000000000 +0000
+++ ncurses-6.5-20241006/test/test_mouse.c 2024-10-05 18:47:56.000000000 +0000
@@ -22,7 +22,7 @@
 * THE USE OR OTHER DEALINGS
 IN THE SOFTWARE.                        *
 ******************************************************************************/
/*
- * $Id: test_mouse.c,v 1.32 2024/08/31 10:46:01 Rafael.Kitover Exp $
+ * $Id: test_mouse.c,v 1.33 2024/10/05 18:47:56 tom Exp $
 *
 * Author: Leonid S Usov
 *
@@ -38,7 +38,7 @@
static void
raw_loop(void)
{
-    char *xtermcap;
+    const char *xtermcap;

   printf("Entering raw mode. Ctrl-c to quit.\n");
```

```
Index: test/test_opaque.c
Prereq:  1.15
--- ncurses-6.5-20240928+/test/test_opaque.c 2022-12-11 00:03:10.000000000 +0000
+++ ncurses-6.5-20241006/test/test_opaque.c 2024-10-05 19:27:33.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2007-2008,2009 Free Software Foundation, Inc.                  *
 *                                                                          *
                                                                            *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
/*
- * $Id: test_opaque.c,v 1.15 2022/12/11 00:03:10 tom Exp $
+ * $Id: test_opaque.c,v 1.16 2024/10/05 19:27:33 tom Exp $
 *
 * Author: Thomas E Dickey
 *
@@ -157,13 +157,13 @@
}

static int
-status_y(WINDOW *stswin, int cell)
+status_y(const WINDOW *stswin, int cell)
{
   return (cell % getmaxy(stswin));
}

static int
-status_x(WINDOW *stswin, int cell)
+status_x(const WINDOW *stswin, int cell)
{
   return (15 * (cell / getmaxy(stswin)));
}
Index: test/test_sgr.c
Prereq:  1.22
--- ncurses-6.5-20240928+/test/test_sgr.c 2023-05-27 20:13:10.000000000 +0000
+++ ncurses-6.5-20241006/test/test_sgr.c 2024-10-06 21:05:50.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2019-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2019-2023,2024 Thomas E. Dickey                                *
 * Copyright 2015-2016,2017 Free Software Foundation, Inc.                  *
```

```
 *                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -30,7 +30,7 @@
/*
 * Author: Thomas E. Dickey
 *
- * $Id: test_sgr.c,v 1.22 2023/05/27 20:13:10 tom Exp $
+ * $Id: test_sgr.c,v 1.25 2024/10/06 21:05:50 tom Exp $
 *
 * A simple demo of the sgr/sgr0 terminal capabilities.
 */
@@ -142,10 +142,10 @@
#define MASK_REV  (1 << 2)

static void
-dumpit(unsigned bits, unsigned ignore, const char *sgr, const char *sgr0)
+dumpit(unsigned bits, unsigned ignore, NCURSES_CONST char *sgr, NCURSES_CONST char *sgr0)
{
-    static const char sample[] = "abcdefghijklm";
-    static
 char params[] = "SURBDBIPA";
+    static NCURSES_CONST char sample[] = "abcdefghijklm";
+    static NCURSES_CONST char params[] = "SURBDBIPA";
    unsigned n;

    printf("%4u ", bits);
@@ -177,12 +177,11 @@
static void
brute_force(const char *name)
{
-    unsigned count;
-    char *my_sgr;
-    char *my_sgr0;
-    char *my_bold;
-    char *my_revs;
-    char *my_smso;
+    NCURSES_CONST char *my_sgr;
+    NCURSES_CONST char *my_sgr0;
+    NCURSES_CONST char *my_bold;
+    NCURSES_CONST char *my_revs;
+    NCURSES_CONST char *my_smso;
    char *my_name = strdup(name);

    if (db_list) {
@@ -219,6 +218,7 @@
 unsigned ignore = 0;
 unsigned reason = 0;
 unsigned repeat = 0;
```

```
+ unsigned count;
 for (count = 0; count < MAXSGR; ++count) {
     values[count] = tparm(my_sgr,
      BITS2P(1),
@@ -334,7 +334,7 @@
main(int argc, char *argv[])
{
    int ch;
-    char *name;
+    const char *name;

    while ((ch = getopt(argc, argv, OPTS_COMMON "d:e:nq")) != -1) {
 switch (ch)
 {
@@ -369,7 +369,7 @@
    } else if ((name = getenv("TERM")) != 0) {
 brute_force(name);
    } else {
- static char dumb[] = "dumb";
+ static const char dumb[] = "dumb";
 brute_force(dumb);
    }

Index: test/test_tparm.c
Prereq:  1.39
--- ncurses-6.5-20240928+/test/test_tparm.c 2023-11-11 01:00:03.000000000 +0000
+++ ncurses-6.5-20241006/test/test_tparm.c 2024-10-06 20:50:27.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020-2022,2023 Thomas E. Dickey                                *
+ * Copyright 2020-2023,2024 Thomas E. Dickey                                *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
 * copy of this software and associated documentation files (the            *
@@ -29,7 +29,7 @@
/*
 * Author: Thomas E. Dickey
 *
- * $Id: test_tparm.c,v 1.39 2023/11/11 01:00:03
 tom Exp $
+ * $Id: test_tparm.c,v 1.42 2024/10/06 20:50:27 tom Exp $
 *
 * Exercise tparm/tiparm, either for all possible capabilities with fixed
 * parameters, or one capability with specific combinations of parameters.
@@ -107,7 +107,7 @@
}

static int
```

```
-isNumeric(char *source)
+isNumeric(NCURSES_CONST char *source)
{
   char *next = 0;
   long value = strtol(source, &next, 0);
@@ -245,7 +245,7 @@
#define NS_9(fmt) NS_8(fmt), NumStr(8)

static void
-test_tparm(const char *name, const char *format, long *number, char **string)
+test_tparm(const char *name, NCURSES_CONST char *format, long *number, char **string)
{
   char *use_strings[MAX_PARM];
   char *result = NULL;
@@ -527,7 +527,7 @@
    }
 } else {
    char *s = t_opt;
-    char *t;
+    NCURSES_CONST char *t;
    while ((t = strtok(s, ",")) != 0) {
  s = 0;
  if (len_terms + 2 >= max_terms) {
@@ -603,7 +603,7 @@
#if NCURSES_XNAMES
    len_caps = std_caps;
    if (cur_term) {
-  TERMTYPE *term =
+  NCURSES_CONST TERMTYPE *term =
 (TERMTYPE *) cur_term;
  for (n = STRCOUNT; n < NUM_STRINGS(term); ++n) {
     GrowArray(all_caps, max_caps, len_caps);
     GrowArray(cap_name, max_name, len_caps);
Index: test/test_vidputs.c
Prereq:  1.15
--- ncurses-6.5-20240928+/test/test_vidputs.c 2022-12-10 23:23:27.000000000 +0000
+++ ncurses-6.5-20241006/test/test_vidputs.c 2024-10-06 21:17:54.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2020-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2020-2022,2024 Thomas E. Dickey                                *
 * Copyright 2013-2014,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -27,7 +27,7 @@
 * authorization.                                                           *
 ****************************************************************************/
```

```
/*
- * $Id: test_vidputs.c,v 1.15 2022/12/10 23:23:27 tom Exp $
+ * $Id: test_vidputs.c,v 1.16 2024/10/06 21:17:54 tom Exp $
 *
 * Demonstrate the vidputs and vidattr functions.
 * Thomas Dickey - 2013/01/12
@@ -51,7 +51,7 @@
}

static bool
-outs(const char *s)
+outs(NCURSES_CONST char *s)
{
   if (VALID_STRING(s)) {
 tputs(s, 1, outc);
Index: test/testcurs.c
Prereq:  1.58
--- ncurses-6.5-20240928+/test/testcurs.c 2023-05-28 14:23:34.000000000 +0000
+++ ncurses-6.5-20241006/test/testcurs.c 2024-10-05 19:17:19.000000000 +0000
@@ -6,7 +6,7 @@
 *  wrs(5/28/93) -- modified to be consistent (perform identically) with either
 *                  PDCurses or under Unix System V, R4
 *
- * $Id: testcurs.c,v 1.58 2023/05/28 14:23:34 tom Exp $
+ * $Id: testcurs.c,v 1.59 2024/10/05 19:17:19 tom Exp $
 */

#include <test.priv.h>
@@ -245,7 +245,7 @@
 wclrtobot(win);
 if (c >= KEY_MIN)
     wprintw(win, "Key Pressed: %s", keyname(c));
- else if (isprint(c))
+ else if (isprint(UChar(c)))
    wprintw(win, "Key Pressed: %c", c);
 else
    wprintw(win, "Key Pressed: %s", unctrl(UChar(c)));
@@ -748,8 +748,8 @@
 keypad(stdscr, TRUE);
 raw();
 key = getch();
- if (key < KEY_MIN && key > 0 && isalpha(key)) {
-     if (islower(key))
+ if (key < KEY_MIN && key > 0 && isalpha(UChar(key))) {
+     if (islower(UChar(key)))
  key = toupper(key);
    for (n = 0; n < MAX_OPTIONS; ++n) {
  if (key == command[n].text[0]) {
```

```
Index: test/testscanw.c
Prereq:  1.15
--- ncurses-6.5-20240928+/test/testscanw.c 2022-12-11 00:10:29.000000000 +0000
+++ ncurses-6.5-20241006/test/testscanw.c 2024-10-05 19:27:33.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
- * Copyright 2019-2020,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 *
 Copyright 1998-2002,2006 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -30,7 +30,7 @@
 * Date:  1997/03/17
 * From:  bayern@morpheus.cis.yale.edu
 *
- * $Id: testscanw.c,v 1.15 2022/12/11 00:10:29 tom Exp $
+ * $Id: testscanw.c,v 1.16 2024/10/05 19:27:33 tom Exp $
 */
#include <test.priv.h>

@@ -85,7 +85,7 @@
   curses_trace(TRACE_UPDATE | TRACE_CALLS);
#endif
   while (optind < argc) {
- char *token = argv[optind++];
+ const char *token = argv[optind++];
 if (isdigit(UChar(*token)))
    move(atoi(token), 0);
 else if (!strcmp(token, "k+"))
Index: test/view.c
Prereq:  1.145
--- ncurses-6.5-20240928+/test/view.c 2022-12-04 00:40:11.000000000 +0000
+++ ncurses-6.5-20241006/test/view.c 2024-10-06 21:08:05.000000000 +0000
@@ -1,5 +1,5 @@
/****************************************************************************
-
 * Copyright 2019-2021,2022 Thomas E. Dickey                                *
+ * Copyright 2019-2022,2024 Thomas E. Dickey                                *
 * Copyright 1998-2016,2017 Free Software Foundation, Inc.                  *
 *                                                                          *
 * Permission is hereby granted, free of charge, to any person obtaining a  *
@@ -52,7 +52,7 @@
 * scroll operation worked, and the refresh() code only had to do a
 * partial repaint.
 *
- * $Id: view.c,v 1.145 2022/12/04 00:40:11 tom Exp $
+ * $Id: view.c,v 1.147 2024/10/06 21:08:05 tom Exp $
```

```
 */

#include <test.priv.h>
@@ -93,8 +93,7 @@

#if USE_WIDEC_SUPPORT
    for (;;) {
- int count;
- TEST_CCHAR(src, count, {
+ TEST_CCHAR(src, {
     int len = wcwidth(test_wch[0]);
     result += (len > 0) ? len : 1;
     ++src;
@@ -186,12 +185,10 @@
      */
     {
  int j;
-  int width = 1;
+  int width;

  for (j = actual = 0; j < shift; ++j) {
-      int count;
-
-
+
    TEST_CCHAR(s + j, count, {
+      TEST_CCHAR(s + j, {
   width = wcwidth(test_wch[0]);
      }
      , {
@@ -294,7 +291,7 @@

#if USE_WIDEC_SUPPORT
    if (!memcmp("\357\273\277", my_blob, 3)) {
- char *s = my_blob + 3;
+ const char *s = my_blob + 3;
 char *d = my_blob;
 Trace(("trim BOM"));
 do {
@@ -329,7 +326,7 @@
 char *s;
 int y, x;
#if USE_WIDEC_SUPPORT
- char *last = my_vec[k] + (int) strlen(my_vec[k]);
+ const char *last = my_vec[k] + (int) strlen(my_vec[k]);
 wchar_t wch[2];
 size_t rc;
#ifndef state_unused
@@ -408,7 +405,7 @@
```

```
int
main(int argc, char *argv[])
{
-    static const char *help[] =
+    static NCURSES_CONST char *help[] =
     {
 "Commands:",
 "  q,^Q,ESC       - quit this program",
@@ -659,7 +656,7 @@
     beep();
     break;
 }
- if (c >= KEY_MIN || (c > 0 && !isdigit(c))) {
+ if (c >= KEY_MIN || (c > 0 && !isdigit(UChar(c)))) {
     got_number = FALSE;
     value = 0;
 }
```

Found in path(s):
* /ncurses-6-5-20241006-patch-gz/ncurses-6.5-20241006.patch

1.130 github.com/aws/aws-sdk-go-v2/service/dynamodb 1.50.1

1.130.1 Available under license :

```
GetLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
```

```
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
```

```
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)
```

```
// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string
```

```
// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
```

```
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
```

```
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
```

```
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
```

```
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
```

Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions

InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity

ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
```

```
                "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP \n\t\t\taddresses, and the credential provider for user administration.</p>"
              }
            },
            "ActiveDirectoryType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
              "traits": {
                "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
          "type": "structure",
          "members": {
            "DomainName": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
              }
            },
            "DomainIpv4List": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active Directory.</p>",
                "smithy.api#length": {
                  "min": 1,
                  "max": 2
                }
              }
            },
            "DomainCredentialsProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration.</p>"
              }
            },
            "DomainNetworkSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for \n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n          <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n          </note>",
            "smithy.api#http":
 {
              "code": 200,
              "method": "POST",
              "uri": "/user/AssociateUser"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
```

```
      "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
         }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

      {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
```

```
            "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
                  "smithy.api#required": {}
               }
            },
            "LicenseServerSettings": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                  "smithy.api#required": {}
               }
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse": {
         "type": "structure",
         "members": {
            "IdentityProviderArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                    "smithy.api#required": {}
                }
            },
             "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                    "smithy.api#required": {}
                }
            }
        },
```

```
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
      "type": "structure",
      "members": {
        "LicenseServerEndpoint": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
          "traits": {
            "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
```

```
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
```

```
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}

      }
       },
       "com.amazonaws.licensemanagerusersubscriptions#Directory": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
         }
       },
       "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/DisassociateUser"
          },
          "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
      "type": "structure",
      "members": {
        "Username": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the user.</p>"
          }
        },
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based subscriptions.</p>"
          }
        },
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
          "traits": {
            "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity provider.</p>"
          }
        },
        "InstanceUserArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate from the EC2 instance.</p>"
          }
        },
        "Domain": {
          "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
```

```
        "members": {
            "Attribute": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
                }
            },
            "Operation": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
                }
            },
            "Value": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>Value of the filter.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
            "ActiveDirectoryIdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
                 "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
```

```
"com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
    "type": "structure",
    "members": {
        "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                "smithy.api#required": {}
            }
        },
        "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                "smithy.api#required": {}
            }
        },
        "Status": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                "smithy.api#required": {}
            }
        },
        "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
            }
        },
        "FailureMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
            }
        }
    },
```

```
      "traits": {
        "smithy.api#documentation": "<p>Describes an identity provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
      "type": "list",
      "member": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
      "type": "structure",
      "members": {
        "InstanceId": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
            "smithy.api#required": {}
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
            "smithy.api#required": {}
          }
        },
        "Products": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
            "smithy.api#required": {}
          }
        },
        "LastStatusCheckDate": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The date of the last status check.</p>"
          }
        },
        "StatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
          }
        }
```

```
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },

    "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                    "smithy.api#required": {}
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance user.</p>"
            }
        },
        "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
        },
        "Domain": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
        },
        "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
        },
        "DisassociationDate": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based subscriptions.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
    "type": "structure",
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
```

```
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
          },
          {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager User Subscriptions",
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",
```

```
            "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager User Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region":
{
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                    "type": "Boolean"
                },
                "UseFIPS": {
                    "builtIn": "AWS::UseFIPS",
                    "required": true,
                    "default": false,
                    "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                    "type": "Boolean"
                },
                "Endpoint": {
                    "builtIn": "SDK::Endpoint",
                    "required": false,
                    "documentation": "Override the endpoint used to send this request",
```

```
      "type": "String"
    }
  },
  "rules": [
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Endpoint"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseFIPS"
                },
                true
              ]
            }
          ],
          "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
          "type": "error"
        },
        {
          "conditions": [
            {

              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }
          ],
          "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
          "type": "error"
        },
        {
```

```
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                   "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

```
true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
```

```
                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
```

```
                "argv": [

            {
                    "ref": "PartitionResult"
                },
                "supportsFIPS"
            ]
        },
        true
    ]
  }
 ],
 "rules": [
  {
   "conditions": [],
   "endpoint": {

"url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                "properties": {},
                "headers": {}
            },
            "type": "endpoint"
        }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "FIPS is enabled but this partition does not support FIPS",
        "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
```

```
                {

        "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            true,
                            {
                                "fn": "getAttr",
                                "argv": [
                                    {
                                        "ref": "PartitionResult"
                                    },
                                    "supportsDualStack"
                                ]

        }
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

            ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "DualStack is enabled but this partition does not support DualStack",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "endpoint": {
            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
```

```
                "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "error": "Invalid Configuration: Missing Region",
      "type": "error"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",

    "UseFIPS": true,
        "UseDualStack": false
      }
```

```
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
 true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                     "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }
                  },
```

```
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
```

```
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
                }
            },
            "LicenseServerEndpointId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
```

```
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
```

```
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
       "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
           "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
                }
            },
            "NextToken":
 {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
                }
            },
```

```
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n            <p>Status</p>\n            </li>\n            <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
            "InstanceSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
```

```
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
         },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
```

```
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

         "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
```

```
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
```

```
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
     },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
       }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/identity-provider/RegisterIdentityProvider"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
    "type": "structure",
    "members": {
      "IdentityProvider": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
            }
        },

      "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
```

```
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n         <note>\n
   <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n         </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
                  "smithy.api#required": {}
                }
              }
            },
            "traits": {
              "smithy.api#output": {}
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
            "type": "operation",
            "input": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
            },
            "output": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
            },
            "errors": [
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
              },
              {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
              },
              {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
              }
            ],
            "traits": {
              "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
              "smithy.api#http":
```

```
{
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/identity-provider/UpdateIdentityProviderSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
      "type": "structure",
       "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the identity provider to
update. "
}
},
"UpdateSettings":
{
"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
"traits": {
"smithy.api#documentation": " Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the: \n
\n \n Subnets which you want to add to provision VPC endpoints. \n \n
\n Subnets which you want to remove the VPC endpoints from. \n \n
\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
```

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32
```

```
 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
```

```
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
```

```
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
```

```
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
```

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

```
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}
```

```
type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
```

```
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
```

```
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
```

```
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
```

```
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
```

```
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
```

```
c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
```

```
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
```

```
//
// This member is required.
WorkspaceId *string

// A token from Grafana Labs that ties your Amazon Web Services account with a
// Grafana Labs account. For more information, see [Link your account with Grafana Labs].
//
// [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
GrafanaToken *string

noSmithyDocumentSerde
}

type AssociateLicenseOutput
struct {

// A structure containing data about the workspace.
//
// This member is required.
Workspace *types.WorkspaceDescription

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
```

```
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
```

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
```

```
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
```

InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
```

```
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
           "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of name to filter by.</p>"
           }
        },
        "Values": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
          }
        },
        "Operator": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
          "traits": {
            "smithy.api#documentation": "<p>An operator for filtering results.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

        "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
```

```
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
```

```
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
              "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
          },
          "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
```

```
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
      "type": "service",
      "version": "2018-05-10",
      "operations": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
         },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
    ],
    "traits": {
        "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
            "additionalAllowedHeaders": [
                "*",
                "content-type",
                "x-amz-content-sha256",
                "x-amz-user-agent",
                "x-amzn-platform-id",
                "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
                "Region": {
                    "builtIn": "AWS::Region",
                    "required": false,
                    "documentation": "The AWS region used to dispatch the request.",
                    "type": "String"
                },
                "UseDualStack": {
                    "builtIn": "AWS::UseDualStack",
                    "required": true,
                    "default": false,
                    "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
                     "type": "Boolean"
                },
```

```
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }

        ],
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [],
                  "rules": [
                    {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"

        }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
```

```
                {
                  "conditions": [
                    {

            "fn": "aws.partition",
                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {

                        "ref": "UseFIPS"
                            },
                            true
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {
                              "ref": "UseDualStack"
                            },
                            true
                          ]
                        }

],
                      "rules": [
                        {
                          "conditions": [
                            {
                              "fn": "booleanEquals",
                              "argv": [
                                true,
                                {
                                  "fn": "getAttr",
                                  "argv": [
                                    {
```

```
                                        "ref": "PartitionResult"

                    },
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [

                                     {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {

      "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

            "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [
                      {
                        "conditions": [],
```

```
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled
but this partition does not support FIPS",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true

                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
```

```
                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

        {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ],
 "type": "tree"
 }
 ]
},
"smithy.rules#endpointTests": {
 "testCases": [
  {
   "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
   "expect": {
    "endpoint": {
     "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

 }
   },
   "params": {
    "Region": "us-east-1",
    "UseFIPS": true,
    "UseDualStack": true
   }
  },
  {
   "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
   "expect": {
    "endpoint": {
     "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
    }
   },
   "params": {
    "Region": "us-east-1",
```

```
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {

      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                }

    },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
```

```
"documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                      }
                     },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": true
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {

 "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                      }
                    },
                    "params": {
                      "Region": "us-gov-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

        },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }

        },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
            }
          },
          "params": {
            "Region": "us-isob-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
          },
          "params": {
            "Region": "us-isob-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },

    {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {

      "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
```

```
                    "expect": {
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                        "Region": "us-east-1",
                        "UseFIPS": false,
                        "UseDualStack": true,
                        "Endpoint": "https://example.com"
                    }
                },
                {
                    "documentation": "Missing region",

                "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
    "type": "structure",
    "members": {
        "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
        "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
            <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
```

```
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional
  objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
```

```
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Subscriptions"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
              },
              "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
              },
              "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                    "min": 1,
                    "max": 16384
```

```
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
          "type": "structure",
          "members": {
            "Subscriptions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
              "traits": {
                "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional objects.</p>"

              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
          "type": "operation",
          "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
          },
          "output": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
          ],
          "traits": {
            "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

     "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
 return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
 nextToken from a previously truncated response.</p>"
              }
            }
          },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
            "RegisteredSubscriptionProviders": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
                "traits": {
                    "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}

              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "EQUAL",
                "value": "Equal",
```

```
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                 "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
```

```
        "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
                }
            },
            "SubscriptionProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
```

```
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
      "type": "list",
      "member": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "InProgress",
                "value": "InProgress",
                "documentation": "InProgress status"
               },
              {
                "name": "Completed",
                "value": "Completed",
                "documentation": "Completed status"
              },
              {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
              },
              {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
              }
            ]
```

```
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#length": {
                    "min": 1,
                    "max": 100
                }
            }
        },
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            },
            "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the subscription.</p>"
                }
            },
            "Type": {
                "target": "smithy.api#String",
                "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
                }
```

```
            },
            "InstanceCount": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
               "traits": {
                  "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
         "type": "list",

       "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "RedHat",
                  "value": "RedHat",
                  "documentation": "RedHat subscription provider namespace"
               }
            ]
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
         "type":
 "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
         "type": "string",
         "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
```

```
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
```

```
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
 {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
```

```
Region.</p>"
                }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their

Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf

of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step

ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization

OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.131 icu-libs 74.2-r1

1.131.1 Available under license :

COPYRIGHT AND PERMISSION NOTICE (ICU 58 and later)

Copyright 1991-2018 Unicode, Inc. All rights reserved.
Distributed under the Terms of Use in http://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining
a copy of the Unicode data files and any associated documentation
(the "Data Files") or Unicode software and any associated documentation
(the "Software") to deal in the Data Files or Software
without restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, and/or sell copies of
the Data Files or Software, and to permit persons to whom the Data Files
or Software are furnished to do so, provided that either
(a) this copyright and permission notice appear with all copies
of the Data Files or Software, or
(b) this copyright and permission notice appear in associated
Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF
ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT
NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT OF THIRD PARTY RIGHTS.
IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS
NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL
DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale,
use or other dealings in these Data Files or Software without prior
written authorization of the copyright holder.

Third-Party Software Licenses

This section contains third-party software notices and/or additional
terms for licensed third-party software components included within ICU
libraries.

1. ICU License - ICU 1.8.1 to ICU
57.1

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others
All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the

"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, and/or sell copies of the Software, and to permit persons
to whom the Software is furnished to do so, provided that the above
copyright notice(s) and this permission notice appear in all copies of
the Software and that both the above copyright notice(s) and this
permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT
OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER
OR
HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY
SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER
RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF
CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale, use
or other dealings in this Software without prior written authorization
of the copyright holder.

All trademarks and registered trademarks mentioned herein are the
property of their respective owners.

2. Chinese/Japanese Word Break Dictionary Data (cjdict.txt)

```
#     The Google Chrome software developed by Google is licensed under
# the BSD license. Other software included in this distribution is
# provided under other licenses, as set forth below.
#
#  The BSD License
#  http://opensource.org/licenses/bsd-license.php
 #  Copyright (C) 2006-2008, Google Inc.
#
#  All rights reserved.
#
#  Redistribution and use in source and binary forms, with or without
# modification, are permitted provided that the following conditions are met:
#
#  Redistributions of source code must retain the above copyright notice,
# this list of conditions and the following disclaimer.
#  Redistributions in binary form must reproduce the above
# copyright notice, this list of conditions and the following
# disclaimer in the documentation and/or other materials provided with
# the distribution.
```

```
#  Neither the name of  Google Inc. nor the names of its
# contributors may be used to endorse or promote products derived from
# this software without specific prior written permission.
#
#
#  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
# CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
# INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
# MERCHANTABILITY AND FITNESS FOR A PARTICULAR
 PURPOSE ARE
# DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
# LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
# CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
# SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
# BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
# LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
# NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
# SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
#
#
#  The word list in cjdict.txt are generated by combining three word lists
# listed below with further processing for compound word breaking. The
# frequency is generated with an iterative training against Google web
# corpora.
#
#  * Libtabe (Chinese)
#    - https://sourceforge.net/project/?group_id=1519
#    - Its license terms and conditions are shown below.
#
#  * IPADIC (Japanese)
#    - http://chasen.aist-nara.ac.jp/chasen/distribution.html
 #    - Its license terms and conditions are shown below.
#
#  ---------COPYING.libtabe ---- BEGIN--------------------
#
#  /*
#   * Copyright (c) 1999 TaBE Project.
#   * Copyright (c) 1999 Pai-Hsiang Hsiao.
#   * All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
```

```
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the TaBE Project nor the names of its
#   *   contributors may be used to endorse or promote products derived
#   *   from this software
 without specific prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  /*
#   * Copyright (c) 1999 Computer Systems and Communication Lab,
#   *                    Institute
 of Information Science, Academia
#      *                    Sinica. All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the Computer Systems and Communication Lab
#   *   nor the names of its contributors may be used to endorse or
#   *   promote products derived from this software without specific
#   *   prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND
 ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
```

```
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  Copyright 1996 Chih-Hao Tsai @ Beckman Institute,
#      University of Illinois
#  c-tsai4@uiuc.edu  http://casper.beckman.uiuc.edu/~c-tsai4
#
#  ---------------COPYING.libtabe-----END--------------------------------
#
#
#  ---------------COPYING.ipadic-----BEGIN-------------------------------
 #
#  Copyright 2000, 2001, 2002, 2003 Nara Institute of Science
#  and Technology.  All Rights Reserved.
#
#  Use, reproduction, and distribution of this software is permitted.
#  Any copy of this software, whether in its original form or modified,
#  must include both the above copyright notice and the following
#  paragraphs.
#
#  Nara Institute of Science and Technology (NAIST),
#  the copyright holders, disclaims all warranties with regard to this
#  software, including all implied warranties of merchantability and
#  fitness, in no event shall NAIST be liable for
#  any special, indirect or consequential damages or any damages
#  whatsoever resulting from loss of use, data or profits, whether in an
#  action of contract, negligence or other tortuous action, arising out
#  of or in connection with the use or performance of this software.
#
#  A large portion of the dictionary entries
#  originate from ICOT
 Free Software.  The following conditions for ICOT
#  Free Software applies to the current dictionary as well.
#
#  Each User may also freely distribute the Program, whether in its
#  original form or modified, to any third party or parties, PROVIDED
#  that the provisions of Section 3 ("NO WARRANTY") will ALWAYS appear
#  on, or be attached to, the Program, which is distributed substantially
#  in the same form as set out herein and that such intended
#  distribution, if actually made, will neither violate or otherwise
#  contravene any of the laws and regulations of the countries having
#  jurisdiction over the User or the intended distribution itself.
```

#
NO WARRANTY
#
The program was produced on an experimental basis in the course of the
research and development conducted during the project and is provided
to users as so produced on an experimental basis. Accordingly, the
program is provided without any warranty whatsoever, whether express,
implied,
statutory or otherwise. The term "warranty" used herein
includes, but is not limited to, any warranty of the quality,
performance, merchantability and fitness for a particular purpose of
the program and the nonexistence of any infringement or violation of
any right of any third party.
#
Each user of the program will agree and understand, and be deemed to
have agreed and understood, that there is no warranty whatsoever for
the program and, accordingly, the entire risk arising from or
otherwise connected with the program is assumed by the user.
#
Therefore, neither ICOT, the copyright holder, or any other
organization that participated in or was otherwise related to the
development of the program and their respective officials, directors,
officers and other employees shall be held liable for any and all
damages, including, without limitation, general, special, incidental
and consequential damages, arising out of or otherwise in
connection
with the use or inability to use the program or any product, material
or result produced or otherwise obtained by using the program,
regardless of whether they have been advised of, or otherwise had
knowledge of, the possibility of such damages at any time during the
project or thereafter. Each user will be deemed to have agreed to the
foregoing by his or her commencement of use of the program. The term
"use" as used herein includes, but is not limited to, the use,
modification, copying and distribution of the program and the
production of secondary products from the program.
#
In the case where the program, whether in its original form or
modified, was distributed or delivered to or received by a user from
any person, organization or entity other than ICOT, unless it makes or
grants independently of ICOT any specific warranty to the user in
writing, such person, organization or entity, will also be exempted
from
and not be held liable to the user for any such damages as noted
above as far as the program is concerned.
#
----------COPYING.ipadic-----END----------

3. Lao Word Break Dictionary Data (laodict.txt)

```
#  Copyright (c) 2013 International Business Machines Corporation
#  and others. All Rights Reserved.
#
# Project: http://code.google.com/p/lao-dictionary/
# Dictionary: http://lao-dictionary.googlecode.com/git/Lao-Dictionary.txt
# License: http://lao-dictionary.googlecode.com/git/Lao-Dictionary-LICENSE.txt
#            (copied below)
#
#  This file is derived from the above dictionary, with slight
#  modifications.
#  --------------------------------------------------------------------
#  Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.
#  All rights reserved.
#
#  Redistribution and use in source and binary forms, with or without
#  modification,
#  are permitted provided that the following conditions are met:
 #
#
# Redistributions of source code must retain the above copyright notice, this
#  list of conditions and the following disclaimer. Redistributions in
#  binary form must reproduce the above copyright notice, this list of
#  conditions and the following disclaimer in the documentation and/or
#  other materials provided with the distribution.
#
#
# THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
# "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
# LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
# FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
# COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
# INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
# (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
# SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
# HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
# STRICT LIABILITY, OR
 TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
# ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
# OF THE POSSIBILITY OF SUCH DAMAGE.
#  --------------------------------------------------------------------
```

4. Burmese Word Break Dictionary Data (burmesedict.txt)

```
#  Copyright (c) 2014 International Business Machines Corporation
#  and others. All Rights Reserved.
#
#  This list is part of a project hosted at:
```

```
#    github.com/kanyawtech/myanmar-karen-word-lists
#
#  ------------------------------------------------------------------------
#  Copyright (c) 2013, LeRoy Benjamin Sharon
#  All rights reserved.
#
#  Redistribution and use in source and binary forms, with or without
#  modification, are permitted provided that the following conditions
#  are met: Redistributions of source code must retain the above
#  copyright notice, this list of conditions and the following
#  disclaimer.  Redistributions in binary form must reproduce the
#  above copyright
 notice, this list of conditions and the following
#  disclaimer in the documentation and/or other materials provided
#  with the distribution.
#
#    Neither the name Myanmar Karen Word Lists, nor the names of its
#    contributors may be used to endorse or promote products derived
#    from this software without specific prior written permission.
#
#  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
#  CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
#  INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
#  MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
#  DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS
#  BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
#  EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED
#  TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
#  DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
#  ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 LIABILITY, OR
#  TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF
#  THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
#  SUCH DAMAGE.
#  ------------------------------------------------------------------------
```

5. Time Zone Database

ICU uses the public domain data and code derived from Time Zone Database for its time zone support. The ownership of the TZ database is explained in BCP 175: Procedure for Maintaining the Time Zone Database section 7.

```
# 7.  Database Ownership
#
#    The TZ database itself is not an IETF Contribution or an IETF
#    document.  Rather it is a pre-existing and regularly updated work
#    that is in the public domain, and is intended to remain in the
```

public domain. Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do
not apply to the TZ Database or contributions that individuals make
to it. Should any claims be made and substantiated against the TZ
Database, the organization that is providing
the IANA
Considerations defined in this RFC, under the memorandum of
understanding with the IETF, currently ICANN, may act in accordance
with all competent court orders. No ownership claims will be made
by ICANN or the IETF Trust on the database or the code. Any person
making a contribution to the database or code waives all rights to
future claims in that contribution or in the TZ Database.

6. Google double-conversion

Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following
disclaimer in the documentation and/or other materials
provided
with the distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived
from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
UNICODE LICENSE V3

COPYRIGHT AND PERMISSION NOTICE

Copyright 2016-2024 Unicode, Inc.

NOTICE TO USER: Carefully read the following legal agreement. BY

DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING DATA FILES, AND/OR SOFTWARE, YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.

Permission is hereby granted, free of charge, to any person obtaining a copy of data files and any associated documentation (the "Data Files") or software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that either (a) this copyright and permission notice appear with all copies of the Data Files or Software, or (b) this copyright and permission notice appear in associated Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.

SPDX-License-Identifier: Unicode-3.0

Third-Party Software Licenses

This section contains third-party software notices and/or additional terms for licensed third-party software components included within ICU libraries.

1. ICU License - ICU 1.8.1 to ICU 57.1

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others
All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, and/or sell copies of the Software, and to permit persons
to whom the Software is furnished to do so, provided that the above
copyright notice(s) and this permission notice appear in all copies of
the Software and that both the above copyright notice(s) and this
permission notice appear in supporting documentation.

THE
SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT
OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR
HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY
SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER
RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF
CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale, use
or other dealings in this Software without prior written authorization
of the copyright holder.

All trademarks and registered trademarks mentioned herein are the
property of their respective owners.

2. Time Zone Database

ICU uses the public domain data
and code derived from Time Zone
Database for its time zone support. The ownership of the TZ database
is explained in BCP 175: Procedure for Maintaining the Time Zone
Database section 7.

```
# 7.  Database Ownership
#
#    The TZ database itself is not an IETF Contribution or an IETF
#    document.  Rather it is a pre-existing and regularly updated work
#    that is in the public domain, and is intended to remain in the
#    public domain.  Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do
#    not apply to the TZ Database or contributions that individuals make
```

to it. Should any claims be made and substantiated against the TZ
Database, the organization that is providing the IANA
Considerations defined in this RFC, under the memorandum of
understanding with the IETF, currently ICANN, may act in accordance
with all competent court orders. No ownership claims will be made
by ICANN or the IETF Trust on the database or the code. Any person
making
a contribution to the database or code waives all rights to
future claims in that contribution or in the TZ Database.

1.132 clientmodel 0.6.2

1.132.1 Available under license :

Data model artifacts for Prometheus.
Copyright 2012-2015 The Prometheus Authors

This product includes software developed at
SoundCloud Ltd. (http://soundcloud.com/).

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,

each Contributor hereby grants to You a perpetual,
worldwide, non-exclusive, no-charge, royalty-free, irrevocable
(except as stated in this section) patent license to make, have made,
use, offer to sell, sell, import, and otherwise transfer the Work,
where such license applies only to those patent claims licensable
by such Contributor that are necessarily infringed by their
Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided

that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
    incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!) The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

 Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

1.133 playwright-community-playwright-go 0.5200.0

1.133.1 Available under license :

MIT License

Copyright (c) 2020 Max Schmitt

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.

1.134 github.com/aws/aws-sdk-go-v2/service/internal/s3shared 1.19.6

1.134.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection

```
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
  name: License Scan
  runs-on: ubuntu-latest
  strategy:
   matrix:
    python-version: [3.9]

  steps:
   - name: Checkout target
    uses: actions/checkout@v2
    with:
     path: sdkbase
     ref: ${{ github.base_ref }}
   - name: Checkout this ref
```

```
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
       uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
```

```
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
 //
 // This member is required.
 HomeRegion *string

 // License issuer.
```

```
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
Status types.LicenseStatus

// License version.
Version *string
```

```
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
```

```
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}
```

```
func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
```

ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing

InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
        "ActiveDirectorySettings":
{
          "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
```

\n\t\t\taddresses, and the credential provider for user administration. "
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": " The type of Active Directory either a self-managed Active Directory or an \n\t\t\tAmazon Web Services Managed Active Directory. "
            }
          }
        },
        "traits": {
          "smithy.api#documentation": " Details about an Active Directory identity provider. "
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": " The domain name for the Active Directory. "
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": " A list of domain IPv4 addresses that are used for the Active Directory. ",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": " Points to the <code>CredentialsProvider</code> resource that contains \n\t\t\tinformation about the credential provider for user administration. "
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": " The <code>DomainNetworkSettings</code> resource contains an

```
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                },
                {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n          <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http":
{
            "code": 200,
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based
```

```
subscription.</p>",
                    "smithy.api#required": {}
                }
            },
             "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The identity provider for the user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to associate.</p>"
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
                }
            }
        },
        "traits": {

    "smithy.api#input": {}
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
     },
     "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
     },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },

      {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/CreateLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case
of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed
Active Directory that contains user identity details.</p>",
                "smithy.api#required": {}
              }
            },
            "LicenseServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for
the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables
administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
                "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
          "type": "structure",
          "members": {
            "IdentityProviderArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider specified in the request.</p>"
              }
            },
            "LicenseServerEndpointArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code> resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
          "type": "union",
          "members": {
            "SecretsManagerCredentialsProvider":
{
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials needed for \n\t\t\tuser administration in the Active Directory.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains information about the credential provider for user \n\t\t\tadministration.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
           },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
         ],
         "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
```

```
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#output": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
```

```
information for the user to disassociate.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
            "InstanceUserSummary":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
            "Subnets": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
                "traits": {
                    "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                    "smithy.api#length": {
                        "min": 1
                    },

   "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Attribute": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
```

```
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
                }
            },
            "FailureMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
              "smithy.api#required": {}
            }
          },
          "Products": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
          "type": "structure",
          "members": {
            "Username": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },

        "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
                "smithy.api#required": {}
              }
            },
            "InstanceUserArn": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
```

```
user.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
                }
            },
            "AssociationDate": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
                }
            },
            "DisassociationDate": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
```

```
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id",
            "content-length",
```

```
          "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
              "UseFIPS": {
                "builtIn": "AWS::UseFIPS",
                "required": true,
                "default": false,
                "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                "type": "Boolean"
              },
              "Endpoint": {
                "builtIn": "SDK::Endpoint",
                "required": false,
                "documentation": "Override the endpoint used to send this request",
```

```
        "type": "String"
      }
    },
    "rules": [
      {
        "conditions": [
          {
            "fn": "isSet",
            "argv": [
              {
                "ref": "Endpoint"
              }
            ]
          }
        ],
        "rules": [
          {
            "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
            "type": "error"
          },
          {
            "conditions": [
              {

                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
            "type": "error"
          },
          {
```

```
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

"properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                   "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          {
                            "ref": "UseFIPS"
                          },
```

```
true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsDualStack"
                        ]
                      }
```

```
                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

 {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "fn": "getAttr",
```

```
                    "argv": [

                {
                            "ref": "PartitionResult"
                        },
                        "supportsFIPS"
                    ]
                },
                true
            ]
        }
    ],
    "rules": [
        {
            "conditions": [],
            "endpoint": {

        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                "properties": {},
                "headers": {}
            },
            "type": "endpoint"
        }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "error": "FIPS is enabled but this partition does not support FIPS",
    "type": "error"

}
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
                        {
                            "ref": "UseDualStack"
                        },
                        true
                    ]
                }
            ],
            "rules": [
```

```
                {

        "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]

        }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }

                ],
                    "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
```

```
                "properties": {},
                        "headers": {}
                    },
                    "type": "endpoint"
                }
            ],
            "type": "tree"
        }
      ],
      "type": "tree"
    },
    {
      "conditions": [],
      "error": "Invalid Configuration: Missing Region",
      "type": "error"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",

    "UseFIPS": true,
        "UseDualStack": false
      }
```

```
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS":
 true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
```

```
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
```

```
                {
                  "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": true,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                     "UseDualStack": true
                  }
                },
                {
                  "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
                  "expect": {
                    "endpoint": {
                      "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
                    }
                  },
                  "params": {
                    "Region": "us-gov-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                  }
                },
                {
                  "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
                  "expect": {
                    "endpoint":
{
                      "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                    }
                  },
```

```
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
```

```
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
```

```
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",
                  "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
          "type": "structure",
          "members": {
            "ProvisioningStatus": {
              "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
              "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
              }
            },
            "HealthStatus": {
              "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
              "traits": {
                "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
              }
            },
            "Ipv4Address": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
          "type": "structure",
```

```
        "members": {
            "IdentityProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
                }
            },
            "ServerType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of license server.</p>"
                }
            },
            "ServerEndpoint": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
                }
            },
            "StatusMessage": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
                }
            },
            "LicenseServerEndpointId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
                }
            },
            "LicenseServerEndpointProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                 "traits": {
                    "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
```

```
            }
          },
          "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
          },
          "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
        "type": "string"
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "PROVISIONING",
              "value": "PROVISIONING",
              "documentation": ""
            },
            {
              "name": "PROVISIONING_FAILED",

             "value": "PROVISIONING_FAILED",
              "documentation": ""
            },
            {
              "name": "PROVISIONED",
```

```
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
       "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
```

```
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n                <p>Product</p>\n            </li>\n            <li>\n                <p>DirectoryId</p>\n
</li>\n        </ul>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
```

```
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
              "smithy.api#required": {}
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "InstanceSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
         "type": "structure",
         "members": {
            "MaxResults": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
               "traits": {
                  "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
               }
            },
            "NextToken":
 {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
 \n\tfrom a previously truncated response.</p>"
               }
            },
```

```
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n          <p>Status</p>\n          </li>\n          <li>\n          <p>InstanceId</p>\n
</li>\n       </ul>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
         "type": "structure",
          "members": {
            "InstanceSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output":
 {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
         },
         "errors": [
            {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                    "smithy.api#range": {
                        "min": 1,
                        "max": 100
                    }
                }
```

```
            },
            "Filters": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                  "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n               <p>IdentityProviderArn</p>\n            </li>\n         </ul>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
         "type": "structure",
         "members": {
            "LicenseServerEndpoints": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
               "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
               }
            },
            "NextToken": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
         },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity
provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "ProductUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Product": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
             "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

     "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
```

```
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

    },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/ListUserAssociations"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "InstanceUserSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation":
"<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "MaxResults": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {

         "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
```

```
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
```

```
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
    },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
     },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
       }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
      "smithy.api#http": {
        "code": 200,
        "method": "POST",
        "uri": "/identity-provider/RegisterIdentityProvider"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
    "type": "structure",
    "members": {
      "IdentityProvider": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                "smithy.api#required": {}
            }
        },

      "Product": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                "smithy.api#required": {}
            }
        },
        "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
                "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
        },
        "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
                "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-
\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
            "SecretId": {
                "target": "smithy.api#String",

        "traits": {
                    "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                    "smithy.api#length": {
                        "min": 1
                    }
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
            "smithy.api#length": {
                "min": 5,
```

```
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Settings": {

  "type": "structure",
      "members": {
        "Subnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
            "smithy.api#length": {
              "min": 1
            },
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
            "smithy.api#required": {}
          }
        }
      },

      "traits": {
        "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
resources\n\t\t\tin the VPC.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/StartProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
```

```
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
          "smithy.api#http":
```

```
{
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to stop the product \n\t\t\tsubscription.</p>"
            }
           }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
        "smithy.api#http": {
          "method": "PUT",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

     "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "Tags": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
            "smithy.api#required": {}
          }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
```

```
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
      "type": "structure",
      "members": {},
```

```
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

    },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/identity-provider/UpdateIdentityProviderSettings"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
      "type": "structure",
       "members": {
        "IdentityProvider": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
        },
        "Product": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
```

Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n "
}
},
"IdentityProviderArn": {
"target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
"traits": {
"smithy.api#documentation": " The Amazon Resource Name (ARN) of the identity provider to
update. "
}
},
"UpdateSettings":
{
"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
"traits": {
"smithy.api#documentation": " Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the: \n
\n \n Subnets which you want to add to provision VPC endpoints. \n \n
\n Subnets which you want to remove the VPC endpoints from. \n \n
\n Security group ID which permits traffic to the VPC endpoints. \n \n ",
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#input": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
{
"type": "structure",
"members": {
"IdentityProviderSummary": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
"traits": {
"smithy.api#required": {}
}
}
},
"traits": {
"smithy.api#output": {}
}
},
"com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
"type": "structure",
"members": {
"AddSubnets": {

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
 {}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A parameter is not valid.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
```

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32
```

```
 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
```

```
 return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
 return err
 }
 if err = addRetry(stack, options); err != nil {
 return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
 return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
 return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
 return err
 }
 if err =
addClientUserAgent(stack, options); err != nil {
 return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
```

```
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return
err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if
```

```
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
```

```
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
```

```
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack,
options, "ListLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
```

```
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
```

```
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
```

InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger

```
  InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}
```

```
type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
```

```
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if
```

```
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}
```

```
type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err
```

```
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
```

```
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
```

```
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
```

```
c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
```

```
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
```

```
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
if err != nil {
 return
err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
```

```
//
// This member is required.
WorkspaceId *string

// A token from Grafana Labs that ties your Amazon Web Services account with a
// Grafana Labs account. For more information, see [Link your account with Grafana Labs].
//
// [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
GrafanaToken *string

noSmithyDocumentSerde
}

type AssociateLicenseOutput
struct {

// A structure containing data about the workspace.
//
// This member is required.
Workspace *types.WorkspaceDescription

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
```

```
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
```

```
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
!= nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
```

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
```

```
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
```

```
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
```

InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
```

```
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
           "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The type of name to filter by.</p>"
           }
        },
        "Values": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
          "traits": {
            "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
          }
        },
        "Operator": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
          "traits": {
            "smithy.api#documentation": "<p>An operator for filtering results.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
      "type":
 "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
      },
      "output": {
        "target":
```

```
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetRegisteredSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

        "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
```

```
        "input": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetServiceSettings"

            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
        "type": "structure",
        "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
```

```
            }
          },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
             "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
          "AmiId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
            "traits": {
              "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
          },
          "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
            }
          },
          "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
          },
```

```
            "OsVersion": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
               }
            },
            "SubscriptionProviderCreateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
               }
            },
            "SubscriptionProviderUpdateTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
               }
            },
            "DualSubscription": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
               }
            },
            "RegisteredWithSubscriptionProvider": {
               "target": "smithy.api#String",
               "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
         }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
      "type": "service",
      "version": "2018-05-10",
      "operations": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
         },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
          }
        ],
        "traits": {
          "aws.api#service": {
            "sdkId": "License Manager Linux Subscriptions",
             "arnNamespace": "license-manager-linux-subscriptions",
            "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-linux-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager Linux Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region": {
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
                 "type": "Boolean"
              },
```

```
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                {
                  "fn": "isSet",
                  "argv": [
                    {
                      "ref": "Endpoint"
                    }
                  ]
                }
              ],
              "rules": [
                {
                  "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }

        ],
                  "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                  "type": "error"
                },
                {
                  "conditions": [],
                  "rules": [
                    {
```

```
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseDualStack"
                      },
                      true
                    ]

}
                ],
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"

        }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
```

```
                {
                  "conditions": [
                    {

            "fn": "aws.partition",
                      "argv": [
                        {
                          "ref": "Region"
                        }
                      ],
                      "assign": "PartitionResult"
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {

                        "ref": "UseFIPS"
                            },
                            true
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            {
                              "ref": "UseDualStack"
                            },
                            true
                          ]
                        }

],
                      "rules": [
                        {
                          "conditions": [
                            {
                              "fn": "booleanEquals",
                              "argv": [
                                true,
                                {
                                  "fn": "getAttr",
                                  "argv": [
                                    {
```

```
                                        "ref": "PartitionResult"

                    },
                                        "supportsFIPS"
                                    ]
                                }
                            ]
                        },
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                true,
                                {
                                    "fn": "getAttr",
                                    "argv": [

                                     {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],

    "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],

                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
```

```
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                "type": "error"
              }
            ],
            "type": "tree"
          },
          {

      "conditions": [
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

            "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true

                  ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "rules": [
                      {
                        "conditions": [],
```

```
                                        "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                            "headers": {}
                                        },
                                        "type": "endpoint"
                                    }
                                ],
                                "type": "tree"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled
but this partition does not support FIPS",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true

                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
```

```
                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

        {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                            "properties": {},
```

```
                                "headers": {}
                            },
                            "type": "endpoint"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        }
    ],
    "type": "tree"
  },
  {
    "conditions": [],
    "error": "Invalid Configuration: Missing Region",
    "type": "error"
  }
 ],
 "type": "tree"
 }
 ]
},
"smithy.rules#endpointTests": {
 "testCases": [
  {
   "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
   "expect": {
    "endpoint": {
     "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

 }
   },
   "params": {
    "Region": "us-east-1",
    "UseFIPS": true,
    "UseDualStack": true
   }
  },
  {
   "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
   "expect": {
    "endpoint": {
     "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
    }
   },
   "params": {
    "Region": "us-east-1",
```

```
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {

    "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
                }
            },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true
            }
        },
        {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
                }

    },
            "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                }
            },
            "params": {
                "Region": "cn-north-1",
                "UseFIPS": true,
                "UseDualStack": true
            }
        },
        {
```

```
"documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                      }
                     },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": true
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {

 "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                      }
                    },
                    "params": {
                      "Region": "us-gov-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": true
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }

     },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": true
        }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
            "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
            }
        },
        "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
        }
    },
    {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
            }

        },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
            }
          },
          "params": {
            "Region": "us-iso-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {

    "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
              }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

    }
            },
            "params": {
              "Region": "us-isob-east-1",
```

```
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },

    {
          "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
          "expect": {
            "endpoint": {
              "url": "https://example.com"
            }
          },
          "params": {
            "UseFIPS": false,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips enabled and dualstack disabled",
          "expect": {
            "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
          },
          "params": {

      "Region": "us-east-1",
            "UseFIPS": true,
            "UseDualStack": false,
            "Endpoint": "https://example.com"
          }
        },
        {
          "documentation": "For custom endpoint with fips disabled and dualstack enabled",
```

```
                    "expect": {
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                        "Region": "us-east-1",
                        "UseFIPS": false,
                        "UseDualStack": true,
                        "Endpoint": "https://example.com"
                    }
                },
                {
                    "documentation": "Missing region",

                "expect": {
                        "error": "Invalid Configuration: Missing Region"
                    }
                }
            ],
            "version": "1.0"
        }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
    "type": "string",
    "traits": {
        "smithy.api#enum": [
            {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
            },
            {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
            }
        ]
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
    "type": "structure",
    "members": {
        "SourceRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
```

```
                "smithy.api#required": {}
            }
        },
        "OrganizationIntegration": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
            "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
        "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListLinuxSubscriptionInstances"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
```

```
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
            <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
```

```
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional
  objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
```

```
"<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "Subscriptions"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Filters": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n      <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't match a certain subscription's name.</p>\n      <p>The valid names for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>Subscription</code>\n      </p>\n      </li>\n      </ul>\n      <p>The valid Operators for this filter are:</p>\n      <ul>\n      <li>\n      <p>\n      <code>contains</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>equals</code>\n      </p>\n      </li>\n      <li>\n      <p>\n      <code>Notequal</code>\n      </p>\n      </li>\n      </ul>"
                }
              },
              "MaxResults": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                "traits": {
                  "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                }
              },
              "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the nextToken from a previously truncated response.</p>",
                  "smithy.api#length": {
                    "min": 1,
                    "max": 16384
```

```
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
          "type": "structure",
          "members": {
            "Subscriptions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
              "traits": {
                "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
 isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
 next request to retrieve \n\tadditional objects.</p>"

              }
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
          "type": "operation",
          "input": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
          },
          "output": {
            "target":
 "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
```

```
            }
          ],
          "traits": {
            "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListRegisteredSubscriptionProviders"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "RegisteredSubscriptionProviders"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSources": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

     "traits": {
                "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
 return \n\t\t\tin the list.</p>"
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
 nextToken from a previously truncated response.</p>"
              }
            }
          },
```

```
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
            "RegisteredSubscriptionProviders": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
                "traits": {
                    "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
                }
            },
            "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
             }
        ],
        "traits": {
```

```
            "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
            "smithy.api#http": {
              "method": "GET",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#readonly": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
          "type": "structure",
          "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}

              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
          "type": "structure",
          "members": {
            "tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {
                "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "EQUAL",
                "value": "Equal",
```

```
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

    "name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
      },
```

```
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                 "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
                "traits": {
```

```
          "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                "traits": {
                    "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
                }
            },
            "SubscriptionProviderArn": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
                }
            },
            "SubscriptionProviderStatus": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
                }
            },
```

```
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
      "type": "list",
      "member": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "InProgress",
                "value": "InProgress",
                "documentation": "InProgress status"
               },
              {
                "name": "Completed",
                "value": "Completed",
                "documentation": "Completed status"
              },
              {
                "name": "Successful",
                "value": "Successful",
                "documentation": "Successful status"
              },
              {
                "name": "Failed",
                "value": "Failed",
                "documentation": "Failed status"
              }
            ]
```

```
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#length": {
                    "min": 1,
                    "max": 100
                }
            }
        },
        "traits": {
            "smithy.api#length": {
                "min": 1,
                "max": 100
            },
            "smithy.api#uniqueItems": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
        "type": "map",
        "key": {
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the subscription.</p>"
                }
            },
            "Type": {
                "target": "smithy.api#String",
                "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
                }
```

```
            },
            "InstanceCount": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
               "traits": {
                  "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
         "type": "list",

       "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
         "type": "string",
         "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
         "type": "string",
         "traits": {
            "smithy.api#enum": [
               {
                  "name": "RedHat",
                  "value": "RedHat",
                  "documentation": "RedHat subscription provider namespace"
               }
            ]
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
         "type":
 "list",
         "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
         "type": "string",
         "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
               "method": "PUT",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
         "type": "structure",
         "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                   "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "tags": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
```

```
        "type": "map",
        "key":
{
            "target": "smithy.api#String"
        },
        "value": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
```

```
            "method": "DELETE",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

    "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "tagKeys": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
            "traits": {
              "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
              "smithy.api#httpQuery": "tagKeys",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input":
 {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/UpdateServiceSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
              "smithy.api#required":
{}
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
              "smithy.api#required": {}
            }
          },
          "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
              "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
```

```
Region.</p>"
                }
            }

        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
                    "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
                }
            },
            "LinuxSubscriptionsDiscoverySettings": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
                }

    },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
                }
             }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their

Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf

of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step

ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization

OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.135 musl-utils 1.2.5-r9

1.135.1 Available under license :

musl as a whole is licensed under the following standard MIT license:

Copyright 2005-2020 Rich Felker, et al.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Authors/contributors include:

A. Wilcox
Ada Worcester
Alex Dowad
Alex Suykov
Alexander Monakov
Andre McCurdy
Andrew Kelley
Anthony G. Basile
Aric Belsito
Arvid Picciani
Bartosz Brachaczek
Benjamin Peterson
Bobby Bingham
Boris Brezillon
Brent Cook
Chris Spiegel
Clment Vasseur
Daniel Micay
Daniel Sabogal
Daurnimator
David Carlier
David Edelsohn
Denys Vlasenko
Dmitry Ivanov
Dmitry V. Levin

Drew DeVault
Emil Renner Berthing
Fangrui Song
Felix Fietkau
Felix Janda
Gianluca Anzolin
Hauke Mehrtens
He X
Hiltjo Posthuma
Isaac Dunham
Jaydeep Patil
Jens Gustedt
Jeremy Huntwork
Jo-Philipp Wich
Joakim Sindholt
John Spencer
Julien Ramseier
Justin Cormack
Kaarle Ritvanen
Khem Raj
Kylie McClain
Leah Neukirchen
Luca Barbato
Luka
Perkov
M Farkas-Dyck (Strake)
Mahesh Bodapati
Markus Wichmann
Masanori Ogino
Michael Clark
Michael Forney
Mikhail Kremnyov
Natanael Copa
Nicholas J. Kain
orc
Pascal Cuoq
Patrick Oppenlander
Petr Hosek
Petr Skocik
Pierre Carrier
Reini Urban
Rich Felker
Richard Pennington
Ryan Fairfax
Samuel Holland
Segev Finer
Shiz
sin

Solar Designer
Stefan Kristiansson
Stefan O'Rear
Szabolcs Nagy
Timo Ters
Trutz Behn
Valentin Ochs
Will Dietz
William Haddon
William Pitcock

Portions of this software are derived from third-party works licensed
under terms compatible with the above MIT license:

The TRE regular expression implementation (src/regex/reg* and
src/regex/tre*) is Copyright 2001-2008 Ville Laurikari and licensed
under a 2-clause BSD license (license text in the source files). The
included version has been heavily modified by Rich Felker in 2012, in
the interests of size, simplicity, and namespace cleanliness.

Much of the math library code (src/math/* and src/complex/*) is
Copyright 1993,2004
 Sun Microsystems or
Copyright 2003-2011 David Schultz or
Copyright 2003-2009 Steven G. Kargl or
Copyright 2003-2009 Bruce D. Evans or
Copyright 2008 Stephen L. Moshier or
Copyright 2017-2018 Arm Limited
and labelled as such in comments in the individual source files. All
have been licensed under extremely permissive terms.

The ARM memcpy code (src/string/arm/memcpy.S) is Copyright 2008
The Android Open Source Project and is licensed under a two-clause BSD
license. It was taken from Bionic libc, used on Android.

The AArch64 memcpy and memset code (src/string/aarch64/*) are
Copyright 1999-2019, Arm Limited.

The implementation of DES for crypt (src/crypt/crypt_des.c) is
Copyright 1994 David Burren. It is licensed under a BSD license.

The implementation of blowfish crypt (src/crypt/crypt_blowfish.c) was
originally written by Solar Designer and placed into the public
domain. The code also comes with a fallback permissive license for use
in jurisdictions that may not recognize the
 public domain.

The smoothsort implementation (src/stdlib/qsort.c) is Copyright 2011

Valentin Ochs and is licensed under an MIT-style license.

The x86_64 port was written by Nicholas J. Kain and is licensed under the standard MIT terms.

The mips and microblaze ports were originally written by Richard Pennington for use in the ellcc project. The original code was adapted by Rich Felker for build system and code conventions during upstream integration. It is licensed under the standard MIT terms.

The mips64 port was contributed by Imagination Technologies and is licensed under the standard MIT terms.

The powerpc port was also originally written by Richard Pennington, and later supplemented and integrated by John Spencer. It is licensed under the standard MIT terms.

All other files which have no copyright comments are original works produced specifically for use as part of this library, written either by Rich Felker, the main author of the library, or by one or more contibutors listed
above. Details on authorship of individual files
can be found in the git version control history of the project. The omission of copyright and license comments in each file is in the interest of source tree size.

In addition, permission is hereby granted for all public header files (include/* and arch/*/bits/*) and crt files intended to be linked into applications (crt/*, ldso/dlstart.c, and arch/*/crt_arch.h) to omit the copyright notice and permission notice otherwise required by the license, and to use these files without any requirement of attribution. These files include substantial contributions from:

Bobby Bingham
John Spencer
Nicholas J. Kain
Rich Felker
Richard Pennington
Stefan Kristiansson
Szabolcs Nagy

all of whom have explicitly granted such permission.

This file previously contained text expressing a belief that most of the files covered by the above exception were sufficiently trivial not to be subject to copyright, resulting in confusion over whether it negated

the permissions granted in the license. In the spirit of
permissive licensing, and of not having licensing issues being an
obstacle to adoption, that text has been removed.

1.136 ca-certificates 20250619-r0

1.136.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
#!/usr/bin/env perl
# ***************************************************************************
# *                                  _   _ ____  _
# *  Project                     ___| | | |  _ \| |
# *                             / __| | | | |_) | |
# *                            | (__| |_| |  _ <| |___
# *                             \___|\___/|_| \_\_____|
# *
# * Copyright (C) Daniel Stenberg, <daniel@haxx.se>, et al.
# *
# * This software is licensed as described in the file COPYING, which
# * you should have received as part of this distribution. The terms
# * are also available at https://curl.se/docs/copyright.html.
# *
# * You may opt to use, copy, modify, merge, publish, distribute and/or sell
# * copies of the Software, and permit persons to whom the Software is
# * furnished to do so, under the terms of the COPYING file.
# *
# * This software is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY
#
 * KIND, either express or implied.
# *
# * SPDX-License-Identifier: curl
# *
# ***************************************************************************
# This Perl script creates a fresh ca-bundle.crt file for use with libcurl.
# It downloads certdata.txt from Mozilla's source tree (see URL below),
# then parses certdata.txt and extracts CA Root Certificates into PEM format.
# These are then processed with the OpenSSL commandline tool to produce the
# final ca-bundle.crt file.
# The script is based on the parse-certs script written by Roland Krikava.
# This Perl script works on almost any platform since its only external
# dependency is the OpenSSL commandline tool for optional text listing.
# Hacked by Guenter Knauf.
#
```

Found in path(s):
* /ca-certificates-20250619-tar-bz2/ca-certificates-20250619/mk-ca-bundle.pl

No license file was found, but licenses were detected in source scan.

/* c_rehash.c - Create hash symlinks for certificates
* C implementation based on the original Perl and shell versions
*
* Copyright (c) 2013-2014 Timo Teräs <timo.teras@iki.fi>
* All rights reserved.
*
* This software is licensed under the MIT License.
* Full license available at: http://opensource.org/licenses/MIT
*/

Found in path(s):
* /ca-certificates-20250619-tar-bz2/ca-certificates-20250619/c_rehash.c
Mozilla Public License
Version 2.0
1. Definitions
1.1. “Contributor”
means each individual or legal entity that creates, contributes to the creation of, or owns Covered Software.

1.2. “Contributor Version”
means the combination of the Contributions of others (if any) used by a Contributor and that particular Contributor’s Contribution.

1.3. “Contribution”
means Covered Software of a particular Contributor.

1.4. “Covered Software”
means Source Code Form to which the initial Contributor has attached the notice in Exhibit A, the Executable Form of such Source Code Form, and Modifications of such Source Code Form, in each case including portions thereof.

1.5. “Incompatible With Secondary Licenses”
means

that the initial Contributor has attached the notice described in Exhibit B to the Covered Software; or

that the Covered Software was made available under the terms of version 1.1 or earlier of the License, but not also under the terms of a Secondary License.

1.6. “Executable Form”
means
any form of the work other than Source Code Form.

1.7. “Larger Work”
means a work that combines Covered Software with other material, in a separate file or files, that is not Covered Software.

1.8. “License”

means this document.

1.9. “Licensable”
means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently, any and all of the rights conveyed by this License.

1.10. “Modifications”
means any of the following:

any file in Source Code Form that results from an addition to, deletion from, or modification of the contents of Covered Software; or

any new file in Source Code Form that contains any Covered Software.

1.11. “Patent Claims” of a Contributor
means any patent claim(s), including without limitation, method, process, and apparatus claims, in any patent Licensable by such Contributor that would be infringed, but for the grant of the License, by the making, using, selling, offering for sale, having made, import, or transfer
of either its Contributions or its Contributor Version.

1.12. “Secondary License”
means either the GNU General Public License, Version 2.0, the GNU Lesser General Public License, Version 2.1, the GNU Affero General Public License, Version 3.0, or any later versions of those licenses.

1.13. “Source Code Form”
means the form of the work preferred for making modifications.

1.14. “You” (or “Your”)
means an individual or a legal entity exercising rights under this License. For legal entities, “You” includes any entity that controls, is controlled by, or is under common control with You. For purposes of this definition, “control” means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. License Grants and Conditions
2.1. Grants
Each Contributor hereby grants You a world-wide, royalty-free, non-exclusive
license:

under intellectual property rights (other than patent or trademark) Licensable by such Contributor to use, reproduce, make available, modify, display, perform, distribute, and otherwise exploit its Contributions, either on an unmodified basis, with Modifications, or as part of a Larger Work; and

under Patent Claims of such Contributor to make, use, sell, offer for sale, have made, import, and otherwise transfer either its Contributions or its Contributor Version.

2.2. Effective Date
The licenses granted in Section 2.1 with respect to any Contribution become effective for each Contribution on the

date the Contributor first distributes such Contribution.

2.3. Limitations on Grant Scope
The licenses granted in this Section 2 are the only rights granted under this License. No additional rights or licenses will be implied from the distribution or licensing of Covered Software under this License. Notwithstanding Section 2.1(b) above, no patent license is granted by a Contributor:

for
any code that a Contributor has removed from Covered Software; or

for infringements caused by: (i) Your and any other third party's modifications of Covered Software, or (ii) the combination of its Contributions with other software (except as part of its Contributor Version); or

under Patent Claims infringed by Covered Software in the absence of its Contributions.

This License does not grant any rights in the trademarks, service marks, or logos of any Contributor (except as may be necessary to comply with the notice requirements in Section 3.4).

2.4. Subsequent Licenses
No Contributor makes additional grants as a result of Your choice to distribute the Covered Software under a subsequent version of this License (see Section 10.2) or under the terms of a Secondary License (if permitted under the terms of Section 3.3).

2.5. Representation
Each Contributor represents that the Contributor believes its Contributions are its original creation(s) or it has sufficient rights
to grant the rights to its Contributions conveyed by this License.

2.6. Fair Use
This License is not intended to limit any rights You have under applicable copyright doctrines of fair use, fair dealing, or other equivalents.

2.7. Conditions
Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted in Section 2.1.

3. Responsibilities
3.1. Distribution of Source Form
All distribution of Covered Software in Source Code Form, including any Modifications that You create or to which You contribute, must be under the terms of this License. You must inform recipients that the Source Code Form of the Covered Software is governed by the terms of this License, and how they can obtain a copy of this License. You may not attempt to alter or restrict the recipients' rights in the Source Code Form.

3.2. Distribution of Executable Form
If You distribute Covered Software in Executable Form then:

such Covered Software must also be made available in Source Code Form, as described in
Section 3.1, and You must inform recipients of the Executable Form how they can obtain a copy of such Source Code Form by reasonable means in a timely manner, at a charge no more than the cost of distribution to the

recipient; and

You may distribute such Executable Form under the terms of this License, or sublicense it under different terms, provided that the license for the Executable Form does not attempt to limit or alter the recipients' rights in the Source Code Form under this License.

3.3. Distribution of a Larger Work
You may create and distribute a Larger Work under terms of Your choice, provided that You also comply with the requirements of this License for the Covered Software. If the Larger Work is a combination of Covered Software with a work governed by one or more Secondary Licenses, and the Covered Software is not Incompatible With Secondary Licenses, this License permits You to additionally distribute such Covered Software under the terms of such Secondary License(s),
so that the recipient of the Larger Work may, at their option, further distribute the Covered Software under the terms of either this License or such Secondary License(s).

3.4. Notices
You may not remove or alter the substance of any license notices (including copyright notices, patent notices, disclaimers of warranty, or limitations of liability) contained within the Source Code Form of the Covered Software, except that You may alter any license notices to the extent required to remedy known factual inaccuracies.

3.5. Application of Additional Terms
You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, You may do so only on Your own behalf, and not on behalf of any Contributor. You must make it absolutely clear that any such warranty, support, indemnity, or liability obligation is offered by You alone, and You hereby agree to indemnify every Contributor for any liability incurred
by such Contributor as a result of warranty, support, indemnity or liability terms You offer. You may include additional disclaimers of warranty and limitations of liability specific to any jurisdiction.

4. Inability to Comply Due to Statute or Regulation
If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Software due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be placed in a text file included with all distributions of the Covered Software under this License. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Termination
5.1. The rights granted under this License will terminate automatically if You fail to comply with any of its
terms. However, if You become compliant, then the rights granted under this License from a particular Contributor are reinstated (a) provisionally, unless and until such Contributor explicitly and finally terminates Your grants, and (b) on an ongoing basis, if such Contributor fails to notify You of the non-compliance by some reasonable means prior to 60 days after You have come back into compliance. Moreover, Your grants from a particular Contributor are reinstated on an ongoing basis if such Contributor notifies You of the non-compliance by some reasonable means, this is the first time You have received notice of non-compliance with this License from such Contributor, and You become compliant prior to 30 days after Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent infringement claim (excluding declaratory judgment actions, counter-claims, and cross-claims) alleging that a Contributor Version directly or indirectly

infringes any patent,
then the rights granted to You by any and all Contributors for the Covered Software under Section 2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or Your distributors under this License prior to termination shall survive termination.

6. Disclaimer of Warranty
Covered Software is provided under this License on an “as is” basis, without warranty of any kind, either expressed, implied, or statutory, including, without limitation, warranties that the Covered Software is free of defects, merchantable, fit for a particular purpose or non-infringing. The entire risk as to the quality and performance of the Covered Software is with You. Should any Covered Software prove defective in any respect, You (not any Contributor) assume the cost of any necessary servicing, repair, or correction. This disclaimer of warranty constitutes
an essential part of this License. No use of any Covered Software is authorized under this License except under this disclaimer.

7. Limitation of Liability
Under no circumstances and under no legal theory, whether tort (including negligence), contract, or otherwise, shall any Contributor, or anyone who distributes Covered Software as permitted above, be liable to You for any direct, indirect, special, incidental, or consequential damages of any character including, without limitation, damages for lost profits, loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses, even if such party shall have been informed of the possibility of such damages. This limitation of liability shall not apply to liability for death or personal injury resulting from such party’s negligence to the extent applicable law prohibits such limitation. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so
this exclusion and limitation may not apply to You.

8. Litigation
Any litigation relating to this License may be brought only in the courts of a jurisdiction where the defendant maintains its principal place of business and such litigation shall be governed by laws of that jurisdiction, without reference to its conflict-of-law provisions. Nothing in this Section shall prevent a party’s ability to bring cross-claims or counter-claims.

9. Miscellaneous
This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not be used to construe this License against a Contributor.

10. Versions of the License
10.1. New Versions
Mozilla Foundation is the license steward. Except as provided in Section 10.3, no one other
than the license steward has the right to modify or publish new versions of this License. Each version will be given a distinguishing version number.

10.2. Effect of New Versions

You may distribute the Covered Software under the terms of the version of the License under which You originally received the Covered Software, or under the terms of any subsequent version published by the license steward.

10.3. Modified Versions
If you create software not governed by this License, and you want to create a new license for such software, you may create and use a modified version of this License if you rename the license and remove any references to the name of the license steward (except to note that such modified license differs from this License).

10.4. Distributing Source Code Form that is Incompatible With Secondary Licenses
If You choose to distribute Source Code Form that is Incompatible With Secondary Licenses under the terms of this version of the License, the notice described in
Exhibit B of this License must be attached.

Exhibit A - Source Code Form License Notice
This Source Code Form is subject to the terms of the Mozilla Public License, v. 2.0. If a copy of the MPL was not distributed with this file, You can obtain one at https://mozilla.org/MPL/2.0/.

If it is not possible or desirable to put the notice in a particular file, then You may include the notice in a location (such as a LICENSE file in a relevant directory) where a recipient would be likely to look for such a notice.

You may add additional accurate notices of copyright ownership.

Exhibit B - “Incompatible With Secondary Licenses” Notice
This Source Code Form is “Incompatible With Secondary Licenses”, as defined by the Mozilla Public License, v. 2.0.
No license file was found, but licenses were detected in source scan.

#
This Source Code Form is subject to the terms of the Mozilla Public
License, v. 2.0. If a copy of the MPL was not distributed with this
file, You can obtain one at http://mozilla.org/MPL/2.0/.

Found in path(s):
* /ca-certificates-20250619-tar-bz2/ca-certificates-20250619/certdata.txt

1.137 libcrypto3 3.3.4-r0

1.137.1 Notifications :

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)
This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).
This product includes software written by Tim Hudson (tjh@cryptsoft.com).

1.137.2 Available under license :

LibreSSL files are retained under the copyright of the authors. New
additions are ISC licensed as per OpenBSD's normal licensing policy,
or are placed in the public domain.

The OpenSSL code is distributed under the terms of the original OpenSSL
licenses which follow:

LICENSE ISSUES
==============

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of
the OpenSSL License and the original SSLeay license apply to the toolkit.
See below for the actual license texts. In case of any license issues
related to OpenSSL please contact openssl-core@openssl.org.

OpenSSL License

/* ==
* Copyright (c) 1998-2011 The OpenSSL Project. All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
*
* 1. Redistributions of source code must retain the above
 copyright
*   notice, this list of conditions and the following disclaimer.
*
* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following disclaimer in
*   the documentation and/or other materials provided with the
*   distribution.
*
* 3. All advertising materials mentioning features or use of this
*   software must display the following acknowledgment:
*   "This product includes software developed by the OpenSSL Project
*   for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
*
* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
*   endorse or promote products derived from this software without
*   prior written permission. For written permission, please contact
*   openssl-core@openssl.org.
*
* 5. Products derived from this software may not be called "OpenSSL"
*   nor may "OpenSSL" appear in their names without prior written
*   permission of the OpenSSL Project.
 *
* 6. Redistributions of any form whatsoever must retain the following
*   acknowledgment:
*   "This product includes software developed by the OpenSSL Project

*   for use in the OpenSSL Toolkit (http://www.openssl.org/)"
*
* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY
* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR
* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY
 OF SUCH DAMAGE.
* ==
*
* This product includes cryptographic software written by Eric Young
* (eay@cryptsoft.com). This product includes software written by Tim
* Hudson (tjh@cryptsoft.com).
*
*/

Original SSLeay License

/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
* All rights reserved.
*
* This package is an SSL implementation written
* by Eric Young (eay@cryptsoft.com).
* The implementation was written so as to conform with Netscapes SSL.
*
* This library is free for commercial and non-commercial use as long as
* the following conditions are aheared to. The following conditions
* apply to all code found in this distribution, be it the RC4, RSA,
* lhash, DES, etc., code; not just the SSL code. The SSL documentation
* included with this distribution is covered by the same copyright terms
* except that the holder is Tim Hudson (tjh@cryptsoft.com).
*
* Copyright
 remains Eric Young's, and as such any Copyright notices in
* the code are not to be removed.
* If this package is used in a product, Eric Young should be given attribution
* as the author of the parts of the library used.
* This can be in the form of a textual message at program startup or
* in documentation (online or textual) provided with the package.
*

* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the copyright
*   notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following disclaimer in the
*   documentation and/or other materials provided with the distribution.
* 3. All advertising materials mentioning features or use of this software
*   must display the following acknowledgement:
 *   "This product includes cryptographic software written by
*   Eric Young (eay@cryptsoft.com)"
*   The word 'cryptographic' can be left out if the rouines from the library
*   being used are not cryptographic related :-).
* 4. If you include any Windows specific code (or a derivative thereof) from
*   the apps directory (application code) you must include an acknowledgement:
*   "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
*
* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER
 CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
* SUCH DAMAGE.
*
* The licence and distribution terms for any publically available version or
* derivative of this code cannot be changed. i.e. this code cannot simply be
* copied and put under another distribution licence
* [including the GNU Public Licence.]
*/

1.138 github.com/aws/aws-sdk-go-v2/internal/endpoints/v2 2.7.6

1.138.1 Available under license :

GetLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata

legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
       uses: actions/checkout@v2
       with:
         path: sdkbase
         ref: ${{ github.base_ref }}
     - name: Checkout this ref
       uses: actions/checkout@v2
       with:
         path: new-ref
         fetch-depth: 0
     - name: Get Diff
       run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
     - name: Get Target Files
       run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
     - name: Checkout scancode
       uses: actions/checkout@v2
       with:
         repository: nexB/scancode-toolkit
         path: scancode-toolkit
         fetch-depth: 1
     - name: Set up Python ${{ matrix.python-version }}
        uses: actions/setup-python@v2
       with:
         python-version: ${{ matrix.python-version }}
     # ScanCode
     - name: Self-configure scancode
       working-directory: ./scancode-toolkit
       run: ./scancode --help
     - name: Run Scan code on target
       run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
     - name: Run Scan code on pr ref
       run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
```

```
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string
```

```
// Configuration for consumption of the license. Choose a provisional
// configuration for workloads running with continuous connectivity. Choose a
// borrow configuration for workloads with offline usage.
//
// This member is required.
ConsumptionConfiguration *types.ConsumptionConfiguration

// License entitlements.
//
// This member is required.
Entitlements []types.Entitlement

// Home Region for the license.
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
```

```
 // License Manager, see the [TagResource]operation.
 //
 // [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
 Tags []types.Tag

 noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License status.
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
```

```
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err
= addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
 return err
```

```
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
 err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return
 err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
```

RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength

SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer

InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
```

```
            "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
        "type": "structure",
        "members": {
            "DirectoryId": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
                "traits": {
                    "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
                }
            },
            "ActiveDirectorySettings":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
                }
            },
            "ActiveDirectoryType": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
                "traits": {
                    "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
            "DomainName": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
                }
            },
            "DomainIpv4List": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
                "traits": {
                    "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
```

```
Directory.</p>",
                    "smithy.api#length": {
                      "min": 1,
                      "max": 2
                    }
                  }
                },
                "DomainCredentialsProvider": {
                  "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
                  "traits": {
                    "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
                  }
                },
                "DomainNetworkSettings": {
                  "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
                  "traits": {
                    "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
                  }
                }
              },
              "traits": {
                "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
              }
            },
            "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
 {
              "type": "string",
              "traits": {
                "smithy.api#enum": [
                  {
                    "name": "SELF_MANAGED",
                    "value": "SELF_MANAGED",
                    "documentation": "SELF_MANAGED type of Active Directory"
                  },
                  {
                    "name": "AWS_MANAGED",
                    "value": "AWS_MANAGED",
                    "documentation": "AWS_MANAGED type of Active Directory"
                  }
                ]
              }
            },
            "com.amazonaws.licensemanagerusersubscriptions#Arn": {
              "type": "string",
```

```
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUser": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n            <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
```

```
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
              "smithy.api#required": {}
            }
          },
           "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

    "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
      "type": "structure",
      "members": {
        "InstanceUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
         }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
        "smithy.api#error": "server"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
```

```
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
```

```
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                "traits": {
                    "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
{
        "type": "structure",
        "members": {
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
                }
            },
            "LicenseServerEndpointArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
            "SecretsManagerCredentialsProvider":
{
                "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
                "traits": {
                    "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
                }
            }
        },
        "traits": {
```

```
            "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
           },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
          ],
          "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
          "type": "structure",
```

```
        "members": {
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
              "smithy.api#required": {}
            }
          },
           "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
        "type": "structure",
        "members": {
          "LicenseServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
            }
          }
        },
         "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/DeregisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
```

```
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
             "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}

    }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Directory": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
             },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

      }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
               }
            },
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
               }
```

```
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
               }
            },
            "InstanceUserArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains
information for the user to disassociate.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
         "type": "structure",
         "members": {
            "InstanceUserSummary":
{
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
         "type": "structure",
         "members": {
            "Subnets": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
```

```
            "traits": {
                "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory
domain.</p>",
                "smithy.api#length": {
                  "min": 1
                },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
               "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
               "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
               "smithy.api#required": {}
            }
          },
           "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
               "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
               "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
               "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The status of the
```

```
identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
                }
            },
            "FailureMessage": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
        "type": "list",
        "member": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
        "type": "structure",
        "members": {
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                    "smithy.api#required": {}
                }
            },
            "Products": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
```

```
            "traits": {
              "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
              "smithy.api#required": {}
            }
          },
          "LastStatusCheckDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date of the last status check.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
```

```
      "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
               "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
               "smithy.api#required": {}
            }
         },
         "Status": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
               "smithy.api#required": {}
            }
         },
         "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
               "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
         },
         "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
         },
         "Domain": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
         },
         "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
               "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
         },
         "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
               "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
         }
      },
```

```
        "traits": {
            "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
             "smithy.api#error": "server",
            "smithy.api#httpError": 500
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
         },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
```

```
            "arnNamespace": "license-manager-user-subscriptions",
            "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
          },
          "aws.auth#sigv4": {
            "name": "license-manager-user-subscriptions"
          },
          "aws.protocols#restJson1": {},
          "smithy.api#cors": {
            "additionalAllowedHeaders": [
              "*",
              "content-type",
              "x-amz-content-sha256",
              "x-amz-user-agent",
              "x-amzn-platform-id",
              "x-amzn-trace-id",
              "content-length",

        "x-api-key",
              "authorization",
              "x-amz-date",
              "x-amz-security-token",
              "Access-Control-Allow-Headers",
              "Access-Control-Allow-Methods",
              "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
              "x-amzn-errortype",
              "x-amzn-requestid",
              "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to
utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
```

```
            "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
            "type": "Boolean"
          },
          "UseFIPS": {
            "builtIn": "AWS::UseFIPS",
            "required": true,
            "default": false,
            "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
            "type": "Boolean"
          },
          "Endpoint": {
            "builtIn": "SDK::Endpoint",
            "required": false,
            "documentation": "Override the endpoint used to send this request",
            "type": "String"
          }
        },
        "rules": [
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Endpoint"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "ref": "UseFIPS"
                      },
                      true
                    ]
                  }
                ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
```

```
            {
              "conditions": [
                {

                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseDualStack"
                    },
                    true
                  ]
                }
              ],
              "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
              "type": "error"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": {
                  "ref": "Endpoint"
                },

"properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",
```

```
                "argv": [
                    {
                        "ref": "Region"
                    }
                ],
                "assign": "PartitionResult"
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
```

true

```
                        ]
                    },
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [
                            {
```

"fn": "booleanEquals",

```
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsFIPS"
                                        ]
                                    }
```

```
                ]
              },

              {
                "fn": "booleanEquals",
                "argv": [
                  true,
                  {
                    "fn": "getAttr",
                    "argv": [
                      {
                        "ref": "PartitionResult"
                      },
                      "supportsDualStack"
                    ]
                  }

            ]
              }
            ],
            "rules": [
              {
                "conditions": [],
                "endpoint": {
                  "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                  "properties": {},
                  "headers": {}
                },
                "type": "endpoint"
              }

    ],
            "type": "tree"
          },
          {
            "conditions": [],
            "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
            "type": "error"
          }
        ],
        "type": "tree"
      },
      {
        "conditions": [
          {
            "fn": "booleanEquals",
```

```
                "argv": [

{
                    "ref": "UseFIPS"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "booleanEquals",
                    "argv": [
                      {
                        "fn": "getAttr",
                        "argv": [

          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      },
                      true
                    ]
                  }
                ],
                "rules": [
                  {
                    "conditions": [],
                    "endpoint": {

        "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                      "properties": {},
                      "headers": {}
                    },
                    "type": "endpoint"
                  }
                ],
                "type": "tree"
              },
              {
                "conditions": [],
                "error": "FIPS is enabled but this partition does not support FIPS",
                "type": "error"
```

```
}
                ],
                "type": "tree"
            },
            {
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseDualStack"
                            },
                            true
                        ]
                    }
                ],
                "rules": [
                    {

        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    true,
                                    {
                                        "fn": "getAttr",
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsDualStack"
                                        ]

        }
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {
                                    "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
```

```
                ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "DualStack is enabled but this partition does not support DualStack",
                    "type": "error"
                }
              ],
              "type": "tree"
            },
            {
              "conditions": [],
              "endpoint": {
                "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                "properties": {},
                    "headers": {}
                },
                "type": "endpoint"
              }
            ],
            "type": "tree"
          }
        ],
        "type": "tree"
      },
      {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
      }
    ]
  },
  "smithy.rules#endpointTests": {
    "testCases": [
      {
        "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
        "expect":
{
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
          }
        },
        "params": {
          "Region": "us-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",

      "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
```

```
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS":
true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
```

```
            "UseFIPS": false,
             "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
            "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
          }
        },
        "params": {
          "Region": "us-gov-east-1",
          "UseFIPS": false,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint":
{
            "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
          }
        },
        "params": {
          "Region": "us-iso-east-1",
          "UseFIPS": false,
           "UseDualStack": false
        }
      },
      {
        "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
        "expect": {
          "endpoint": {
            "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
          }
        },
        "params": {
          "Region": "us-isob-east-1",
          "UseFIPS": true,
          "UseDualStack": false
        }
```

```
    },
    {
      "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
        }
      },
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
```

```
"Invalid Configuration: FIPS and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": true,
                      "UseDualStack": false,
                      "Endpoint": "https://example.com"
                    }
                  },
                  {
                    "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                    "expect": {
                      "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                    },
                    "params": {
                      "Region": "us-east-1",
                      "UseFIPS": false,
                      "UseDualStack": true,
                      "Endpoint": "https://example.com"
                     }
                  },
                  {
                    "documentation": "Missing region",
                    "expect": {
                      "error": "Invalid Configuration: Missing Region"
                    }
                  }
                ],
                "version": "1.0"
              }
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
            "type": "structure",
            "members": {
              "ProvisioningStatus": {
                "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
                }
              },
              "HealthStatus": {
                "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
```

```
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
        },
        "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
                "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
        },
        "LicenseServerEndpointProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
             "traits": {
                "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license
\n\t\t\tserver endpoint</p>"
            }
        },
        "LicenseServers": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
            "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent
the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
            }
        },
        "CreationTime": {
            "target": "smithy.api#Timestamp",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when License Manager created the license server
endpoint.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
    "type": "string"
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
    }
},
```

```
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
   "type": "string",
   "traits": {
      "smithy.api#enum": [
         {
            "name": "PROVISIONING",
            "value": "PROVISIONING",
            "documentation": ""
         },
         {
            "name": "PROVISIONING_FAILED",

           "value": "PROVISIONING_FAILED",
            "documentation": ""
         },
         {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
         },
         {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
         },
         {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
         },
         {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
         }
      ]
   }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
   "type": "string",
    "traits": {
      "smithy.api#enum": [
         {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
         },
         {
```

```
                "name": "UNHEALTHY",
                "value": "UNHEALTHY",
                "documentation": ""
              },
              {
                "name": "NOT_APPLICABLE",
                "value": "NOT_APPLICABLE",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
          "type": "list",
          "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
          "type": "structure",
           "members": {
            "ServerType": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
              "traits": {
                "smithy.api#documentation": "<p>The type of license server.</p>",
                "smithy.api#required": {}
              }
            },
            "ServerSettings": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
              "traits": {
                "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
 {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest":
{
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n<ul>\n  <li>\n    <p>Product</p>\n  </li>\n  <li>\n    <p>DirectoryId</p>\n  </li>\n</ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
          "type": "structure",
          "members": {
            "IdentityProviderSummaries": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                "smithy.api#required": {}
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists
the EC2 instances providing user-based subscriptions.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/instance/ListInstances"
        },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
```

```
        "type": "structure",
        "members": {
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "NextToken":
 {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>InstanceId</p>\n
</li>\n        </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
         "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that
contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest
criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
            }
```

```
            }
        },
        "traits": {
            "smithy.api#output":
{}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "LicenseServerEndpoints"
```

```
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n            <li>\n              <p>IdentityProviderArn</p>\n            </li>\n          </ul>"
              }
            },
            "NextToken": {
               "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoints": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that
\n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
              }
            },
```

```
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {

    "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
```

```
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/user/ListProductSubscriptions"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "ProductUserSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
          "type": "structure",
          "members": {
            "Product": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
 | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
              }
            },
            "IdentityProvider": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
              "traits": {
                "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                "smithy.api#required": {}
              }
            },
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
               "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
              }
            },
            "NextToken": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
        "type": "structure",

       "members": {
          "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

       "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
            "smithy.api#http": {
                "method": "GET",
                "uri": "/tags/{ResourceArn}"
             },
            "smithy.api#readonly": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
            "ResourceArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
            "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                    "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
```

```
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

},
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/user/ListUserAssociations"
         },
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "InstanceUserSummaries"
        }
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
      "type": "structure",
```

```
        "members": {
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
```

```
            "InstanceUserSummaries": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
               "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
               }
            },
            "NextToken": {
               "target":
 "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the
next request to retrieve additional objects.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
         "type": "structure",
         "members": {
            "Username": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The user name from the identity provider for this product
user.</p>",
                  "smithy.api#required": {}
               }
            },
            "Product": {

           "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
               "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                  "smithy.api#required": {}
               }
            },
            "Status": {
               "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The status of a product for this user.</p>",
              "smithy.api#required": {}
            }
          },
          "ProductUserArn": {

          "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
            }
          },
          "SubscriptionStartDate": {
            "target": "smithy.api#String",
            "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
            }
          },
          "SubscriptionEndDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The end date of a subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
        "type": "structure",
        "members": {
          "RdsSalCredentialsProvider": {

        "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
              "traits": {
                "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a
reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
                "smithy.api#required": {}
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS)
license server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
         },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
```

```
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
              }
            ],
            "traits": {
              "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
              "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/RegisterIdentityProvider"
              },
              "smithy.api#idempotent": {}
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
            "type": "structure",
            "members": {
              "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                  "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
                  "smithy.api#required": {}
                }
              },

           "Product": {
                "target": "smithy.api#String",
                "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
                  "smithy.api#required": {}
                }
              },
              "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                  "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
                }
              },
              "Tags": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
                 "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
                }
              }
```

```
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceArn":
 {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
          "smithy.api#error": "client",
          "smithy.api#httpError": 404
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
        "type": "structure",
        "members": {
          "SecretId": {
            "target": "smithy.api#String",
```

```
        "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains
credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
              }
            }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
              }
```

```
            }
          },
          "traits": {
            "smithy.api#documentation":
"<p>Contains settings for a specific server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "RDS_SAL",
                "value": "RDS_SAL",
                "documentation": ""
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
            "smithy.api#error": "client"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#Settings": {

      "type": "structure",
          "members": {
            "Subnets": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
              "traits": {
                "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
                "smithy.api#length": {
                  "min": 1
                },
                "smithy.api#required": {}
              }
            },
            "SecurityGroupId": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
              "traits": {
```

```
                "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688 communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
                "smithy.api#required": {}
              }
            }
          },

          "traits": {
            "smithy.api#documentation": "<p>The registered identity providers product related configuration settings such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from resources\n\t\t\tin the VPC.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

             "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
```

provider. \n <note>\n
Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as Pending billing status) in Amazon Web Services Billing. For more information, see Viewing your\n\t\t\t\tmonthly charges in the Amazon Web Services Billing User Guide. \n </note>",
"smithy.api#http": {
"code": 200,
"method": "POST",
"uri": "/user/StartProductSubscription"
}
}
},
"com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
"type": "structure",
"members": {
"Username": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The user name
from the identity provider of the user. ",
"smithy.api#required": {}
}
},
"IdentityProvider": {
"target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
"traits": {
"smithy.api#documentation": " An object that specifies details for the identity provider. ",
"smithy.api#required": {}
}
},
"Product": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The name of the user-based subscription product. \n
Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n ",
"smithy.api#required": {}
}
},
"Domain": {
"target": "smithy.api#String",
"traits": {
"smithy.api#documentation": " The domain name of the Active Directory that contains the user for whom to start the product \n\t\t\tsubscription. "
}

```
            },
            "Tags": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
         "type": "structure",
         "members": {
            "ProductUserSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                  "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {

      "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity
provider.</p>",
          "smithy.api#http":
 {
            "code": 200,
            "method": "POST",
            "uri": "/user/StopProductSubscription"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
            }
          },
          "ProductUserArn": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
          "ProductUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the start product subscription operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
```

```
    "member": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
    "type": "list",
    "member": {
      "target": "smithy.api#String"
    },
    "traits": {
      "smithy.api#length": {
        "min": 0,
        "max": 50
      },
      "smithy.api#sensitive": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
    "type": "operation",
    "input": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
     },
    "output": {
      "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
    },
    "errors": [
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
      },
      {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
      }
    ],
    "traits": {
      "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
      "smithy.api#http": {
        "method": "PUT",
        "uri": "/tags/{ResourceArn}"
      },
      "smithy.api#idempotent": {}
    }
  },
  "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {
```

```
      "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
```

```
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry the request.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
          "smithy.api#http": {
            "method": "DELETE",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want to remove tags from.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
```

```
            },
            "TagKeys": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
               "traits": {
                  "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
                  "smithy.api#httpQuery": "tagKeys",
                   "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
         "type": "operation",
         "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
         },
         "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
         },
         "errors": [
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
            "smithy.api#http": {
```

```
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
            }
          },
          "UpdateSettings":
 {
            "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
            "traits": {
              "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n          <li>\n            <p>Subnets which you want to add to provision VPC endpoints.</p>\n          </li>\n
      <li>\n            <p>Subnets which you want to remove the VPC endpoints from.</p>\n          </li>\n
<li>\n            <p>Security group ID which permits traffic to the VPC endpoints.</p>\n          </li>\n        </ul>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
        "type": "structure",
        "members": {
          "AddSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
              "smithy.api#required":
{}
            }
          },
          "RemoveSubnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
```

```
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>A parameter is not valid.</p>",
            "smithy.api#error": "client"
        }
    }
  }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
```

```
//   - ProductSKU
//
//   - Status
//
//
  - Fingerprint
//
//   - IssuerName
//
//   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
```

```
middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
```

```
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
```

```
 spanBuildRequestStart
 setOperationInput
 ResolveEndpoint
 InterceptBeforeSerialization
 OperationSerializer
 InterceptAfterSerialization
Build stack step
 ClientRequestID
 ComputeContentLength
 SetCredentialSourceMiddleware
 UserAgent
 AddTimeOffsetMiddleware
 RecursionDetection
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
```

```
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string
```

```
 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
```

```
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
```

```
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack,
options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
```

```
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "ListLicenses",
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
```

```
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
```

```
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if
err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options);
 err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
```

```
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
```

```
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
}
if err = addRecursionDetection(stack); err != nil {
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager
```

```
import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData
```

```
// Key fingerprint identifying the license.
//
// This member is required.
KeyFingerprint *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// License beneficiary.
Beneficiary *string

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

// Checkout type.
CheckoutType types.CheckoutType

// Allowed license entitlements.
EntitlementsAllowed []types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the checkout license.
LicenseArn
*string

// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
```

```
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack,
 options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
```

```
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
```

```
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
```

AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
```

```
ClientToken *string

// Digital signature method. The possible value is JSON Web Signature (JWS)
// algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
//
// [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
//
// This member is required.
DigitalSignatureMethod types.DigitalSignatureMethod

// License entitlements. Partial checkouts are not supported.
//
// This member is required.
Entitlements []types.EntitlementData

// Amazon Resource Name (ARN) of the license. The license must use the borrow
// consumption configuration.
//
// This member is required.
LicenseArn *string

// Information about constraints.
CheckoutMetadata []types.Metadata

// Node ID.
NodeId *string

noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

// Information about constraints.
CheckoutMetadata []types.Metadata

// Allowed license entitlements.
EntitlementsAllowed
[]types.EntitlementData

// Date and time at which the license checkout expires.
Expiration *string

// Date and time at which the license checkout is issued.
IssuedAt *string

// Amazon Resource Name (ARN) of the license.
LicenseArn *string
```

```
// License consumption token.
LicenseConsumptionToken *string

// Node ID.
NodeId *string

// Signed token.
SignedToken *string

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
```

```
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
 middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
```

```
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options);
err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return
err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
```

```
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
```

```
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
```

```
 return err
}
err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
```

```
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
```

```
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {
```

```
// Date when the license is deleted.
DeletionDate *string

// License status.
Status types.LicenseDeletionStatus

// Metadata pertaining to the operation's result.
ResultMetadata middleware.Metadata

noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err !=
 nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
```

```
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
```

```
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err !=
nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
```

ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

```
package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if
 err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
```

```
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
}
return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
```

```
    ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
```

RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
```

```
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                 "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider
resource to deregister.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
            "Name": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The type of name to filter by.</p>"
                 }
            },
            "Values": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                "traits": {
                    "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
                }
            },
            "Operator": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
                "traits": {
                    "smithy.api#documentation": "<p>An operator for filtering results.</p>"
                }
            }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
```

```
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

           "traits": {
              "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
            }
          },
          "SecretArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
             }
          },
          "SubscriptionProviderStatusMessage": {
            "target": "smithy.api#String",
```

```
            "traits": {
              "smithy.api#documentation": "<p>The detailed message from your subscription provider token status.</p>"
            }
          },
          "LastSuccessfulDataRetrievalTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/GetServiceSettings"

          },
          "smithy.api#idempotent": {}
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has
been enabled, and which Regions data will be aggregated from.</p>"
          }
        },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
          }
        },
        "StatusMessage": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
          "traits": {
            "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
          }
        },
        "HomeRegions": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
           "traits": {
            "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
          }
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
      "type": "structure",
      "members": {
        "AmiId": {
```

```
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
            }
          },
          "InstanceID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
            }
          },
          "InstanceType": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>The instance type of the resource.</p>"
            }
          },
          "AccountID": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of the instance.</p>"
            }
          },
          "Region": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
            }
          },
          "UsageOperation": {
            "target": "smithy.api#String",

   "traits": {
              "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
            }
          },
          "ProductCode": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a
href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-
operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
            }
        },
        "LastUpdatedTime": {
            "target": "smithy.api#String",
             "traits": {
                "smithy.api#documentation": "<p>The time in which the last discovery updated the instance
details.</p>"
            }
        },
        "SubscriptionName": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
            }
        },
        "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
        },
        "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
        },
        "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
        },
        "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
        },
        "RegisteredWithSubscriptionProvider": {
```

```
                "target": "smithy.api#String",
                "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation":
 "<p>An exception occurred with the service.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
            },
```

```
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
    },
    {
      "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
    }
  ],
  "traits": {
    "aws.api#service": {
      "sdkId": "License Manager Linux Subscriptions",
      "arnNamespace": "license-manager-linux-subscriptions",
      "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
    },
    "aws.auth#sigv4": {
      "name": "license-manager-linux-subscriptions"
    },
    "aws.protocols#restJson1": {},
    "smithy.api#cors": {
      "additionalAllowedHeaders": [
        "*",
        "content-type",
        "x-amz-content-sha256",
        "x-amz-user-agent",
        "x-amzn-platform-id",
        "x-amzn-trace-id"
      ],
      "additionalExposedHeaders": [
        "x-amzn-errortype",
        "x-amzn-requestid",
        "x-amzn-trace-id"
      ]
    },
    "smithy.api#documentation": "<p>With License Manager,
```

```
you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
support dual-stack, dispatching the request MAY return an error.",
               "type": "Boolean"
            },
            "UseFIPS": {
              "builtIn": "AWS::UseFIPS",
              "required": true,
              "default": false,
              "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the
configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
              "type": "Boolean"
            },
            "Endpoint": {
              "builtIn": "SDK::Endpoint",
              "required": false,
              "documentation": "Override the endpoint used to send this request",
              "type": "String"
            }
          },
          "rules": [
            {
              "conditions": [
                 {
                   "fn": "isSet",
                   "argv": [
                      {
                         "ref": "Endpoint"
                      }
                   ]
                 }
              ],
              "rules": [
                 {
```

```
                "conditions": [
                    {
                        "fn": "booleanEquals",
                        "argv": [
                            {
                                "ref": "UseFIPS"
                            },
                            true
                        ]
                    }

            ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
```

```
    }
    ],
    "type": "tree"
},
{
    "conditions": [],
    "rules": [
        {
            "conditions": [
                {
                    "fn": "isSet",
                    "argv": [
                        {
                            "ref": "Region"
                        }
                    ]
                }
            ],
            "rules": [
                {
                    "conditions": [
                        {

    "fn": "aws.partition",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ],
                            "assign": "PartitionResult"
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        {

                                    "ref": "UseFIPS"
                                        },
                                        true
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
```

```
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }

  ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
                        "argv": [
                          true,
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"

              },
                                "supportsFIPS"
                              ]
                            }
                          ]
                        },
                        {
                          "fn": "booleanEquals",
                          "argv": [
                            true,
                            {
                              "fn": "getAttr",
                              "argv": [

                               {
                                    "ref": "PartitionResult"
                                },
                                "supportsDualStack"
                              ]
                            }
                          ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
```

```
"rules": [
                                        {
                                          "conditions": [],
                                          "endpoint": {
                                            "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                            "properties": {},
                                            "headers": {}
                                          },
                                          "type": "endpoint"
                                        }
                                      ],

                            "type": "tree"
                                    }
                                  ],
                                  "type": "tree"
                                },
                                {
                                  "conditions": [],
                                  "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                                  "type": "error"
                                }
                              ],
                              "type": "tree"
                            },
                            {

                    "conditions": [
                                {
                                  "fn": "booleanEquals",
                                  "argv": [
                                    {
                                      "ref": "UseFIPS"
                                    },
                                    true
                                  ]
                                }
                              ],
                              "rules": [
                                {
                                  "conditions": [
                                    {

                            "fn": "booleanEquals",
                                        "argv": [
                                          {
```

```
                                    "fn": "getAttr",
                                    "argv": [
                                        {
                                            "ref": "PartitionResult"
                                        },
                                        "supportsFIPS"
                                    ]
                                },
                                true

                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [],
                    "error": "FIPS is enabled
but this partition does not support FIPS",
                    "type": "error"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [
                {
                    "fn": "booleanEquals",
                    "argv": [
```

```
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true

                        ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [
                                    {
                                        "fn": "booleanEquals",
                                        "argv": [
                                            true,
                                            {
                                                "fn": "getAttr",
                                                "argv": [
                                                    {

                                                        "ref": "PartitionResult"
                                                    },
                                                    "supportsDualStack"
                                                ]
                                            }
                                        ]
                                    }
                                ],
                                "rules": [
                                    {
                                        "conditions": [],
                                        "rules": [

        {
                                                "conditions": [],
                                                "endpoint": {
                                                    "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                    "properties": {},
                                                    "headers": {}
                                                },
                                                "type": "endpoint"
                                            }
                                        ],
                                        "type": "tree"

                        }
                                ],
```

```
                                    "type": "tree"
                                },
                                {
                                    "conditions": [],
                                    "error": "DualStack is enabled but this partition does not support DualStack",
                                    "type": "error"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "rules": [
                                {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
    "testCases": [
        {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
                "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

        }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {

         "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
              }

    },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
```

```
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {

 "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
            }
          },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
            }
           },
          "params": {
            "Region": "cn-north-1",
            "UseFIPS": false,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
              }
            },
            "params": {
              "Region": "cn-north-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {

"documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": true,
              "UseDualStack": true
            }
          },
          {
            "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
              }

           },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
              }
            },
            "params": {
              "Region": "us-gov-east-1",
              "UseFIPS": false,
              "UseDualStack": true
```

```
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
        }

    },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
        }
      },
      "params": {
        "Region": "us-iso-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {

  "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
```

```
                "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
              }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

  }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "Region": "us-east-1",
              "UseFIPS": false,
              "UseDualStack": false,
              "Endpoint": "https://example.com"
            }
          },

        {
            "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
            "expect": {
              "endpoint": {
                "url": "https://example.com"
              }
            },
            "params": {
              "UseFIPS": false,
```

```
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips enabled and dualstack disabled",
              "expect": {
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
              },
              "params": {

      "Region": "us-east-1",
                "UseFIPS": true,
                "UseDualStack": false,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "For custom endpoint with fips disabled and dualstack enabled",
              "expect": {
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
              },
              "params": {
                "Region": "us-east-1",
                "UseFIPS": false,
                "UseDualStack": true,
                "Endpoint": "https://example.com"
              }
            },
            {
              "documentation": "Missing region",

            "expect": {
                "error": "Invalid Configuration: Missing Region"
              }
            }
          ],
          "version": "1.0"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
```

```
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
```

```
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Instances"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
 <code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
 subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
 streamline results:</p>\n        <ul>\n            <li>\n                <p>\n                    <code>AccountID</code>\n
 </p>\n            </li>\n            <li>\n                <p>\n                    <code>AmiID</code>\n                </p>\n            </li>\n
        <li>\n                <p>\n                    <code>DualSubscription</code>\n                </p>\n            </li>\n
 <li>\n                <p>\n                    <code>InstanceID</code>\n                </p>\n            </li>\n            <li>\n
  <p>\n                    <code>InstanceType</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
    <code>ProductCode</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>Region</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>Status</code>\n                </p>\n            </li>\n            <li>\n                <p>\n
 <code>UsageOperation</code>\n                </p>\n            </li>\n        </ul>\n        <p>For each filter, you can use
 one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n                <p>\n                    <code>contains</code>\n                </p>\n            </li>\n            <li>\n
 <p>\n                    <code>equals</code>\n                </p>\n            </li>\n            <li>\n
```

```
            <p>\n                <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
```

```
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "Subscriptions"
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
        "type": "structure",
        "members": {
            "Filters": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                    "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those
that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n
<code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n
<li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n
<p>The valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n
```

```
<code>contains</code>\n </p>\n </li>\n <li>\n <p>\n
<code>equals</code>\n </p>\n </li>\n <li>\n <p>\n
<code>Notequal</code>\n </p>\n </li>\n </ul>"
        }
      },
      "MaxResults": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
        "traits": {
          "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
          "smithy.api#length": {
            "min": 1,
            "max": 16384
          }
        }
      }
    },
    "traits": {
      "smithy.api#documentation": "NextToken
 length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
    "type": "structure",
    "members": {
      "Subscriptions": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
        "traits": {
          "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
        }
      },
      "NextToken": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

        }
      }
    }
  },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
      },
      "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/ListRegisteredSubscriptionProviders"
        },
        "smithy.api#idempotent": {},
        "smithy.api#paginated": {
          "inputToken": "NextToken",
          "outputToken": "NextToken",
          "pageSize": "MaxResults",
          "items": "RegisteredSubscriptionProviders"
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderSources": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

  "traits": {
            "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
          }
```

```
        },
        "MaxResults": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
          "traits": {
            "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
            "smithy.api#range": {
              "min": 1,
              "max": 100
            }
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
          }
        }
      },

      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
      "type": "structure",
      "members": {
        "RegisteredSubscriptionProviders": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
          "traits": {
            "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
          }
        },
        "NextToken": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
```

```
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
           }
        ],
        "traits": {
          "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon
Web Services resource.</p>",
          "smithy.api#http": {
            "method": "GET",
            "uri": "/tags/{resourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "resourceArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to
list metadata tags.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}

             }
            }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
```

```
    "members": {
      "tags": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
        "traits": {
          "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
        }
      }
    },
    "traits": {
      "smithy.api#output": {}
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "EQUAL",
          "value": "Equal",
          "documentation": "Equal operator"
        },
        {
          "name": "NOT_EQUAL",
          "value": "NotEqual",
          "documentation": "Not equal operator"
        },
        {
          "name": "CONTAINS",
          "value": "Contains",
          "documentation": "Contains operator"
        }
      ],
      "smithy.api#length": {
        "min": 1,
        "max": 20
      }
    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
    "type": "string",
    "traits": {
      "smithy.api#enum": [
        {
          "name": "Enabled",
          "value": "Enabled",
          "documentation": "Enabled OrganizationIntegration"
        },
        {
```

```
    "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled OrganizationIntegration"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
        "type": "list",
        "member": {
          "target": "smithy.api#String"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },

         {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring
Your Own License (BYOL) subscription.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/RegisterSubscriptionProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
```

```
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
               "traits": {
                 "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                 "smithy.api#required": {}
               }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                 "smithy.api#required": {}
              }
            },
            "Tags": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
              "traits": {

          "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription provider \n\t\t\tresource.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
          "type": "structure",
          "members": {
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                 "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
              }
            },
            "SubscriptionProviderArn": {
              "target": "smithy.api#String",
              "traits": {
                 "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
```

```
                "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux subscription provider \n\t\t\tthat you requested.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
          "type": "structure",
          "members": {
            "SubscriptionProviderArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
              }
            },
            "SubscriptionProviderSource": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
              "traits": {
                "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
              }
            },
            "SecretArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
              }
            },
            "SubscriptionProviderStatus": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
              "traits": {
                "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
              }
            },
            "SubscriptionProviderStatusMessage": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
              }
```

```
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-\\.]{0,63}:secret:[^/]{1,1023}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "InProgress",
```

```
            "value": "InProgress",
            "documentation": "InProgress status"
          },
          {
            "name": "Completed",
            "value": "Completed",
            "documentation": "Completed status"
          },
          {
            "name": "Successful",
            "value": "Successful",
            "documentation": "Successful status"
          },
          {
            "name": "Failed",
            "value": "Failed",
            "documentation": "Failed status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
```

```
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

     "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
          }
        },
        "InstanceCount": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
          "traits": {
            "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
      "type": "list",

     "member": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
      "type": "string",
      "traits": {
```

```
            "smithy.api#enum": [
                {
                    "name": "RedHat",
                    "value": "RedHat",
                    "documentation": "RedHat subscription provider namespace"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
"list",
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "ACTIVE",
                    "value": "ACTIVE",
                    "documentation": "ACTIVE status"
                },
                {
                    "name": "INVALID",
                    "value": "INVALID",
                    "documentation": "INVALID status"
                },
                {
                    "name": "PENDING",
                    "value": "PENDING",
                    "documentation": "PENDING status"
                }
            ]
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
                "min": 0,
                "max": 50
```

```
            },
            "smithy.api#sensitive": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"

            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
                "method": "PUT",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
        "type": "structure",
        "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                     "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                "smithy.api#required": {}
            }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
      "type": "structure",
      "members": {},
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
      "type": "map",
      "key":
{
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
```

```
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
         },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
            "smithy.api#http": {
                "method": "DELETE",
                "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
        "type": "structure",

   "members": {
            "resourceArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                    "smithy.api#httpLabel": {},
                    "smithy.api#required": {}
                }
            },
            "tagKeys": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
                "traits": {
                    "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                    "smithy.api#httpQuery": "tagKeys",
                    "smithy.api#required": {}
                }
            }
        },
```

```
        "traits": {
            "smithy.api#input":
{}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
        "type": "structure",
        "members": {
            "LinuxSubscriptionsDiscovery": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
                "traits": {
```

```
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
            }
        },
        "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
            }
        },
        "AllowUpdate": {
            "target": "smithy.api#Boolean",
            "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home
Region.</p>"
            }
        }

    }
  },
  "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
    "type": "structure",
    "members": {
      "LinuxSubscriptionsDiscovery": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
        "traits": {
          "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
        }
      },
      "LinuxSubscriptionsDiscoverySettings": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
        "traits": {
          "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>"
        }

  },
        "Status": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being
applied.</p>"
```

```
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings
current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated
data for Linux\n      subscriptions.</p>"
            }
           }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
          "smithy.api#error": "client"
        }
      }
    }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all

other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization

OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody

ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.139 skalibs-libs 2.14.3.0-r0

1.139.1 Available under license :

Copyright (c) 2011-2024 Laurent Bercot <ska-skaware@skarnet.org>

Permission to use, copy, modify, and distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

1.140 busybox 1.37.0-r14

1.140.1 Available under license :

bzip2 applet in busybox is based on lightly-modified source
of bzip2 version 1.0.4. bzip2 source is distributed
under the following conditions (copied verbatim from LICENSE file)
==

This program, "bzip2", the associated library "libbzip2", and all
documentation, are copyright (C) 1996-2006 Julian R Seward. All
rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.

2. The origin of this software must not be misrepresented; you must
not claim that you wrote the original software. If you use this
software in a product, an acknowledgment in the product
documentation would be appreciated but is not required.

3. Altered source versions must be plainly marked as such, and must
not be misrepresented
as being the original software.

4. The name of the author may not be used to endorse or promote
products derived from this software without specific prior written
permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS
OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Julian Seward, Cambridge, UK.
jseward@bzip.org
bzip2/libbzip2 version 1.0.4 of 20 December 2006
--- A note on GPL versions

BusyBox is distributed under version 2 of the General Public License (included
in its entirety, below). Version 2 is the only version of this license which
this version of BusyBox (or modified versions derived from this one) may be
distributed under.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your

freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's
 software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

 When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

 To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

 For example, if you distribute copies of such a program, whether gratis or for
 a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

 We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

 Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

 Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent
 this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

 The precise terms and conditions for copying, distribution and

modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to

this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict
the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity
of the free software distribution system, which is
implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make
exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED
ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where
the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice
like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of
Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General
Public License instead of this License.

1.141 ada 2.9.2-r1

1.141.1 Available under license :

No license file was found, but licenses were detected in source scan.

/* abuild-tar.c - A TAR mangling utility for .APK packages
*
* Copyright (C) 2009 Timo Teräs <timo.teras@iki.fi>
* All rights reserved.
*
* This program is free software; you can redistribute it and/or modify it
* under the terms of the GNU General Public License version 2 as published
* by the Free Software Foundation. See http://www.gnu.org/ for details.
*/

Found in path(s):
* /aports-v2-9-2-zip/aports-v2.9.2/abuild-tar.c
No license file was found, but licenses were detected in source scan.

Distributed under GPL-2

Found in path(s):
* /aports-v2-9-2-zip/aports-v2.9.2/abuild-sign.in
* /aports-v2-9-2-zip/aports-v2.9.2/abuild-keygen.in
* /aports-v2-9-2-zip/aports-v2.9.2/abuild.in
* /aports-v2-9-2-zip/aports-v2.9.2/newapkbuild.in

1.142 bash 5.2.37-r0

1.142.1 Available under license :

Shellfloat is copyright (c) 2020 by Michael Wood.
==========

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for
software and other kinds of works.

The licenses for most software and other practical works are designed
to take away your freedom to share and change the works. By contrast,
the GNU General Public License is intended to guarantee your freedom to
share and change all versions of a program--to make sure it remains free
software for all its users. We, the Free Software Foundation, use the
GNU General Public License for most of our software; it applies also to
any other work
released this way by its authors. You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
them if you wish), that you receive source code or can get it if you
want it, that you can change the software or use pieces of it in new
free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you
these rights or asking you to surrender the rights. Therefore, you have
certain responsibilities if you distribute copies of the software, or if
you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must pass on to the recipients the same
freedoms that you received. You must make sure that they, too, receive
or can get the source code.
And you must show them these terms so they
know their rights.

Developers that use the GNU GPL protect your rights with two steps:
(1) assert copyright on the software, and (2) offer you this License
giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains
that there is no warranty for this free software. For both users' and
authors' sake, the GPL requires that modified versions be marked as
changed, so that their problems will not be attributed erroneously to
authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed
this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the

public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other
parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces
specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to
control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for

the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met.
This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid

circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the

Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no

charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the
only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply

if neither you nor
any third party retains the ability to install
modified object code on the User Product (for example, the work has
been installed in ROM).

The requirement to provide Installation Information does not include a
requirement to continue to provide support service, warranty, or updates
for a work that has been modified or installed by the recipient, or for
the User Product in which it has been modified or installed. Access to a
network may be denied when the modification itself materially and
adversely affects the operation of the network or violates the rules and
protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided,
in accord with this section must be in a format that is publicly
documented (and with an implementation available to the public in
source code form), and must require no special password or key for
unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement
the terms of this
License by making exceptions from one or more of its conditions.
Additional permissions that are applicable to the entire Program shall
be treated as though they were included in this License, to the extent
that they are valid under applicable law. If additional permissions
apply only to part of the Program, that part may be used separately
under those permissions, but the entire Program remains governed by
this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option
remove any additional permissions from that copy, or from any part of
it. (Additional permissions may be written to require their own
removal in certain cases when you modify the work.) You may place
additional permissions on material, added by you to a covered work,
for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you
add to a covered work, you may (if
authorized by the copyright holders of
that material) supplement the terms of this License with terms:

a) Disclaiming warranty or limiting liability differently from the
terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or
author attributions in that material or in the Appropriate Legal

Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or
requiring that modified versions of such material be marked in
reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or
authors of the material; or

e) Declining to grant rights under trademark law for use of some
trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that
material by anyone who conveys the material (or modified versions of
it) with contractual
assumptions of liability to the recipient, for
any liability that these contractual assumptions directly impose on
those licensors and authors.

All other non-permissive additional terms are considered "further
restrictions" within the meaning of section 10. If the Program as you
received it, or any part of it, contains a notice stating that it is
governed by this License along with a term that is a further
restriction, you may remove that term. If a license document contains
a further restriction but permits relicensing or conveying under this
License, you may add to a covered work material governed by the terms
of that license document, provided that the further restriction does
not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you
must place, in the relevant source files, a statement of the
additional terms that apply to those files, or a notice indicating
where to find the applicable terms.

Additional
terms, permissive or non-permissive, may be stated in the
form of a separately written license, or stated as exceptions;
the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly
provided under this License. Any attempt otherwise to propagate or
modify it is void, and will automatically terminate your rights under
this License (including any patent licenses granted under the third
paragraph of section 11).

However, if you cease all violation of this License, then your

license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation
by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept
this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor

has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling
its contributor version,
but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent
license,
and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent

license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF

ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS
THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY
GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE
USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF
DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD
PARTIES OR A FAILURE OF THE PROGRAM
TO OPERATE WITH ANY OTHER PROGRAMS),
EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF
SUCH DAMAGES.

17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided
above cannot be given local legal effect according to their terms,
reviewing courts shall apply local law that most closely approximates
an absolute waiver of all civil liability in connection with the
Program, unless a warranty or assumption of liability accompanies a
copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file
to most effectively
state the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of

MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <https://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper
mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<https://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine
library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License. But first, please read
<https://www.gnu.org/licenses/why-not-lgpl.html>.

GNU Free Documentation License
Version 1.3, 3 November 2008

Copyright (C) 2000, 2001, 2002, 2007, 2008 Free Software Foundation, Inc.
<http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

0. PREAMBLE

The purpose of this License is to make a manual, textbook, or other
functional and useful document "free" in the sense of freedom: to
assure everyone the effective freedom to copy and redistribute it,

with or without modifying it, either commercially or noncommercially. Secondarily, this License preserves for the author and publisher a way to get credit for their work, while not being considered responsible for modifications made by others.

This License is a kind of "copyleft", which means that derivative works of the document must themselves be free in the same sense. It complements the GNU General Public License, which is a copyleft license designed for free software.

We
have designed this License in order to use it for manuals for free software, because free software needs free documentation: a free program should come with manuals providing the same freedoms that the software does. But this License is not limited to software manuals; it can be used for any textual work, regardless of subject matter or whether it is published as a printed book. We recommend this License principally for works whose purpose is instruction or reference.

1. APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that contains a notice placed by the copyright holder saying it can be distributed under the terms of this License. Such a notice grants a world-wide, royalty-free license, unlimited in duration, to use that work under the conditions stated herein. The "Document", below, refers to any such manual or work. Any member of the public is a licensee, and is addressed as "you". You accept the license if you copy,
modify or distribute the work in a way requiring permission under copyright law.

A "Modified Version" of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A "Secondary Section" is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject (or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics.) The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political position regarding them.

The "Invariant Sections" are certain Secondary Sections whose titles
are designated, as being those of Invariant Sections,
 in the notice
that says that the Document is released under this License. If a
section does not fit the above definition of Secondary then it is not
allowed to be designated as Invariant. The Document may contain zero
Invariant Sections. If the Document does not identify any Invariant
Sections then there are none.

The "Cover Texts" are certain short passages of text that are listed,
as Front-Cover Texts or Back-Cover Texts, in the notice that says that
the Document is released under this License. A Front-Cover Text may
be at most 5 words, and a Back-Cover Text may be at most 25 words.

A "Transparent" copy of the Document means a machine-readable copy,
represented in a format whose specification is available to the
general public, that is suitable for revising the document
straightforwardly with generic text editors or (for images composed of
pixels) generic paint programs or (for drawings) some widely available
drawing editor, and that is suitable for input to text formatters
 or
for automatic translation to a variety of formats suitable for input
to text formatters. A copy made in an otherwise Transparent file
format whose markup, or absence of markup, has been arranged to thwart
or discourage subsequent modification by readers is not Transparent.
An image format is not Transparent if used for any substantial amount
of text. A copy that is not "Transparent" is called "Opaque".

Examples of suitable formats for Transparent copies include plain
ASCII without markup, Texinfo input format, LaTeX input format, SGML
or XML using a publicly available DTD, and standard-conforming simple
HTML, PostScript or PDF designed for human modification. Examples of
transparent image formats include PNG, XCF and JPG. Opaque formats
include proprietary formats that can be read and edited only by
proprietary word processors, SGML or XML for which the DTD and/or
processing tools are not generally available, and the
machine-generated HTML, PostScript or PDF produced by some
 word
processors for output purposes only.

The "Title Page" means, for a printed book, the title page itself,
plus such following pages as are needed to hold, legibly, the material
this License requires to appear in the title page. For works in
formats which do not have any title page as such, "Title Page" means
the text near the most prominent appearance of the work's title,
preceding the beginning of the body of the text.

The "publisher" means any person or entity that distributes copies of

the Document to the public.

A section "Entitled XYZ" means a named subunit of the Document whose title either is precisely XYZ or contains XYZ in parentheses following text that translates XYZ in another language. (Here XYZ stands for a specific section name mentioned below, such as "Acknowledgements", "Dedications", "Endorsements", or "History".) To "Preserve the Title" of such a section when you modify the Document means that it remains a section "Entitled XYZ" according to this definition.

The
Document may include Warranty Disclaimers next to the notice which states that this License applies to the Document. These Warranty Disclaimers are considered to be included by reference in this License, but only as regards disclaiming warranties: any other implication that these Warranty Disclaimers may have is void and has no effect on the meaning of this License.

2. VERBATIM COPYING

You may copy and distribute the Document in any medium, either commercially or noncommercially, provided that this License, the copyright notices, and the license notice saying this License applies to the Document are reproduced in all copies, and that you add no other conditions whatsoever to those of this License. You may not use technical measures to obstruct or control the reading or further copying of the copies you make or distribute. However, you may accept compensation in exchange for copies. If you distribute a large enough number of copies you must also follow the conditions in section
3.

You may also lend copies, under the same conditions stated above, and you may publicly display copies.

3. COPYING IN QUANTITY

If you publish printed copies (or copies in media that commonly have printed covers) of the Document, numbering more than 100, and the Document's license notice requires Cover Texts, you must enclose the copies in covers that carry, clearly and legibly, all these Cover Texts: Front-Cover Texts on the front cover, and Back-Cover Texts on the back cover. Both covers must also clearly and legibly identify you as the publisher of these copies. The front cover must present the full title with all words of the title equally prominent and visible. You may add other material on the covers in addition. Copying with changes limited to the covers, as long as they preserve the title of the Document and satisfy these conditions, can be treated

as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit
legibly, you should
put the first ones listed (as many as fit
reasonably) on the actual cover, and continue the rest onto adjacent
pages.

If you publish or distribute Opaque copies of the Document numbering
more than 100, you must either include a machine-readable Transparent
copy along with each Opaque copy, or state in or with each Opaque copy
a computer-network location from which the general network-using
public has access to download using public-standard network protocols
a complete Transparent copy of the Document, free of added material.
If you use the latter option, you must take reasonably prudent steps,
when you begin distribution of Opaque copies in quantity, to ensure
that this Transparent copy will remain thus accessible at the stated
location until at least one year after the last time you distribute an
Opaque copy (directly or through your agents or retailers) of that
edition to the public.

It is requested, but not required, that you contact the authors of the
Document well before
redistributing any large number of copies, to
give them a chance to provide you with an updated version of the
Document.

4. MODIFICATIONS

You may copy and distribute a Modified Version of the Document under
the conditions of sections 2 and 3 above, provided that you release
the Modified Version under precisely this License, with the Modified
Version filling the role of the Document, thus licensing distribution
and modification of the Modified Version to whoever possesses a copy
of it. In addition, you must do these things in the Modified Version:

A. Use in the Title Page (and on the covers, if any) a title distinct
from that of the Document, and from those of previous versions
(which should, if there were any, be listed in the History section
of the Document). You may use the same title as a previous version
if the original publisher of that version gives permission.
B. List on the Title Page, as authors, one or more persons or entities
responsible for authorship of
the modifications in the Modified
Version, together with at least five of the principal authors of the
Document (all of its principal authors, if it has fewer than five),
unless they release you from this requirement.

C. State on the Title page the name of the publisher of the
Modified Version, as the publisher.
D. Preserve all the copyright notices of the Document.
E. Add an appropriate copyright notice for your modifications
adjacent to the other copyright notices.
F. Include, immediately after the copyright notices, a license notice
giving the public permission to use the Modified Version under the
terms of this License, in the form shown in the Addendum below.
G. Preserve in that license notice the full lists of Invariant Sections
and required Cover Texts given in the Document's license notice.
H. Include an unaltered copy of this License.
I. Preserve the section Entitled "History", Preserve its Title, and add
to it an item stating at least the title, year,
new authors, and
publisher of the Modified Version as given on the Title Page. If
there is no section Entitled "History" in the Document, create one
stating the title, year, authors, and publisher of the Document as
given on its Title Page, then add an item describing the Modified
Version as stated in the previous sentence.
J. Preserve the network location, if any, given in the Document for
public access to a Transparent copy of the Document, and likewise
the network locations given in the Document for previous versions
it was based on. These may be placed in the "History" section.
You may omit a network location for a work that was published at
least four years before the Document itself, or if the original
publisher of the version it refers to gives permission.
K. For any section Entitled "Acknowledgements" or "Dedications",
Preserve the Title of the section, and preserve in the section all
the substance and tone of each of the contributor
acknowledgements
and/or dedications given therein.
L. Preserve all the Invariant Sections of the Document,
unaltered in their text and in their titles. Section numbers
or the equivalent are not considered part of the section titles.
M. Delete any section Entitled "Endorsements". Such a section
may not be included in the Modified Version.
N. Do not retitle any existing section to be Entitled "Endorsements"
or to conflict in title with any Invariant Section.
O. Preserve any Warranty Disclaimers.

If the Modified Version includes new front-matter sections or
appendices that qualify as Secondary Sections and contain no material
copied from the Document, you may at your option designate some or all
of these sections as invariant. To do this, add their titles to the
list of Invariant Sections in the Modified Version's license notice.
These titles must be distinct from any other section titles.

You may add a section Entitled "Endorsements", provided it contains

nothing but
endorsements of your Modified Version by various
parties--for example, statements of peer review or that the text has
been approved by an organization as the authoritative definition of a
standard.

You may add a passage of up to five words as a Front-Cover Text, and a
passage of up to 25 words as a Back-Cover Text, to the end of the list
of Cover Texts in the Modified Version. Only one passage of
Front-Cover Text and one of Back-Cover Text may be added by (or
through arrangements made by) any one entity. If the Document already
includes a cover text for the same cover, previously added by you or
by arrangement made by the same entity you are acting on behalf of,
you may not add another; but you may replace the old one, on explicit
permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License
give permission to use their names for publicity for or to assert or
imply endorsement of any Modified Version.

5. COMBINING
DOCUMENTS

You may combine the Document with other documents released under this
License, under the terms defined in section 4 above for modified
versions, provided that you include in the combination all of the
Invariant Sections of all of the original documents, unmodified, and
list them all as Invariant Sections of your combined work in its
license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and
multiple identical Invariant Sections may be replaced with a single
copy. If there are multiple Invariant Sections with the same name but
different contents, make the title of each such section unique by
adding at the end of it, in parentheses, the name of the original
author or publisher of that section if known, or else a unique number.
Make the same adjustment to the section titles in the list of
Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections
Entitled "History"
in the various original documents, forming one section Entitled
"History"; likewise combine any sections Entitled "Acknowledgements",
and any sections Entitled "Dedications". You must delete all sections
Entitled "Endorsements".

6. COLLECTIONS OF DOCUMENTS

You may make a collection consisting of the Document and other documents released under this License, and replace the individual copies of this License in the various documents with a single copy that is included in the collection, provided that you follow the rules of this License for verbatim copying of each of the documents in all other respects.

You may extract a single document from such a collection, and distribute it individually under this License, provided you insert a copy of this License into the extracted document, and follow this License in all other respects regarding verbatim copying of that document.

7. AGGREGATION WITH INDEPENDENT WORKS

A compilation of the Document or its derivatives
with other separate
and independent documents or works, in or on a volume of a storage or distribution medium, is called an "aggregate" if the copyright resulting from the compilation is not used to limit the legal rights of the compilation's users beyond what the individual works permit. When the Document is included in an aggregate, this License does not apply to the other works in the aggregate which are not themselves derivative works of the Document.

If the Cover Text requirement of section 3 is applicable to these copies of the Document, then if the Document is less than one half of the entire aggregate, the Document's Cover Texts may be placed on covers that bracket the Document within the aggregate, or the electronic equivalent of covers if the Document is in electronic form. Otherwise they must appear on printed covers that bracket the whole aggregate.

8. TRANSLATION

Translation is considered a kind of modification, so you may distribute translations of the Document under
the terms of section 4.
Replacing Invariant Sections with translations requires special permission from their copyright holders, but you may include translations of some or all Invariant Sections in addition to the original versions of these Invariant Sections. You may include a translation of this License, and all the license notices in the Document, and any Warranty Disclaimers, provided that you also include

the original English version of this License and the original versions of those notices and disclaimers. In case of a disagreement between the translation and the original version of this License or a notice or disclaimer, the original version will prevail.

If a section in the Document is Entitled "Acknowledgements", "Dedications", or "History", the requirement (section 4) to Preserve its Title (section 1) will typically require changing the actual title.

9. TERMINATION

You may not copy, modify, sublicense, or distribute the Document except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, or distribute it is void, and will automatically terminate your rights under this License.

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, receipt of a copy of some or all of the same material does not give you any rights to use it.

10. FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions of the GNU Free Documentation License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. See http://www.gnu.org/copyleft/.

Each version of the License is given a distinguishing version number. If the Document specifies that a particular numbered version of this License "or any later version" applies to it, you have the option of following the terms and conditions either of that specified version or of any later version that has been published (not as a draft) by the Free Software Foundation. If the Document does not specify a version number of this License, you may choose any version ever published (not as a draft) by the Free Software Foundation. If the Document specifies that a proxy can decide which future versions of this License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Document.

11. RELICENSING

"Massive Multiauthor Collaboration Site" (or "MMC Site") means any World Wide Web server that publishes copyrightable works and also provides prominent facilities for anybody to edit those works. A public wiki that anybody can edit is an example of such a server. A "Massive Multiauthor Collaboration" (or "MMC") contained in the site means any set of copyrightable works thus published on the MMC site.

"CC-BY-SA" means the Creative Commons Attribution-Share Alike 3.0 license published by Creative Commons Corporation, a not-for-profit corporation with a principal place of business in San Francisco, California, as well as future copyleft versions of that license published by that same organization.

"Incorporate" means to publish or republish a Document, in whole or in part, as part of another Document.

An MMC is "eligible for relicensing" if it is licensed under this License, and if all works that were first published under this License somewhere other than this MMC, and subsequently incorporated in whole or in part into the MMC, (1) had no cover texts or invariant sections, and (2) were thus incorporated prior to November 1, 2008.

The operator of an MMC Site may republish an MMC contained in the site under CC-BY-SA on the same site at any time before August 1, 2009, provided the MMC is eligible for relicensing.

ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of

the License in the document and put the following copyright and
license notices just after the title page:

> Copyright (c) YEAR YOUR NAME.
> Permission is granted to copy, distribute and/or modify this document
> under the terms of the GNU Free Documentation License, Version 1.3
> or any later version published by the Free Software Foundation;
> with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts.
> A copy of the license is included in the section entitled "GNU
> Free Documentation License".

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts,
replace the "with...Texts." line with this:

> with the Invariant Sections being LIST THEIR TITLES, with the
> Front-Cover Texts being LIST, and with the Back-Cover Texts being LIST.

If you have Invariant Sections without Cover Texts, or some other
combination of the three, merge those two alternatives to suit the
situation.

If your document contains nontrivial examples of program code, we
recommend releasing these examples in parallel under your choice of
free software license, such as the GNU General Public License,
to permit their use in free software.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed

to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute
and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which
contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,

either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to

control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the
source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each
time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent

license would not permit royalty-free redistribution
of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through
any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the Program
specifies a version number
of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN
IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License,
or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w'
and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
@c The GNU Free Documentation License.
@center Version 1.3, 3 November 2008

@c This file is intended to be included within another document,
@c hence no sectioning command or @node.

@display
Copyright @copyright{} 2000, 2001, 2002, 2007, 2008 Free Software Foundation, Inc.
@uref{http://fsf.org/}

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
@end display

@enumerate 0
@item
PREAMBLE

The purpose of this License is to make a manual, textbook, or other
functional and useful document @dfn{free} in the sense of freedom: to
assure everyone the effective freedom to copy and redistribute it,
with or without modifying it, either commercially or noncommercially.
Secondarily, this License preserves for the author and publisher a way
to get credit for their work, while not being considered responsible
for modifications made by others.

This License is a kind of ``copyleft'', which means that derivative
works of the document
 must themselves be free in the same sense. It
complements the GNU General Public License, which is a copyleft
license designed for free software.

We have designed this License in order to use it for manuals for free
software, because free software needs free documentation: a free
program should come with manuals providing the same freedoms that the
software does. But this License is not limited to software manuals;
it can be used for any textual work, regardless of subject matter or
whether it is published as a printed book. We recommend this License
principally for works whose purpose is instruction or reference.

@item
APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that
contains a notice placed by the copyright holder saying it can be
distributed under the terms of this License. Such a notice grants a
world-wide, royalty-free license, unlimited in duration, to use that
work under the conditions stated herein. The ``Document'', below,
refers

to any such manual or work. Any member of the public is a licensee, and is addressed as ``you''. You accept the license if you copy, modify or distribute the work in a way requiring permission under copyright law.

A ``Modified Version'' of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A ``Secondary Section'' is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject (or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics.) The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political position regarding them.

The ``Invariant Sections'' are certain Secondary Sections whose titles are designated, as being those of Invariant Sections, in the notice that says that the Document is released under this License. If a section does not fit the above definition of Secondary then it is not allowed to be designated as Invariant. The Document may contain zero Invariant Sections. If the Document does not identify any Invariant Sections then there are none.

The ``Cover Texts'' are certain short passages of text that are listed, as Front-Cover Texts or Back-Cover Texts, in the notice that says that the Document is released under this License. A Front-Cover Text may be at most 5 words, and a Back-Cover Text may be at most 25 words.

A ``Transparent'' copy of the Document means a machine-readable copy, represented in a format whose specification is available to the general public, that is suitable for revising the document straightforwardly with generic text editors or (for images composed of pixels) generic paint programs or (for drawings) some widely available drawing editor, and that is suitable for input to text formatters or for automatic translation to a variety of formats suitable for input to text formatters. A copy made in an otherwise Transparent file format whose markup, or absence of markup, has been arranged to thwart or discourage subsequent modification by readers is not Transparent. An image format is not Transparent if used for any substantial amount of text. A copy that is not ``Transparent'' is called ``Opaque''.

Examples of suitable formats for Transparent copies include plain
@sc{ascii} without markup, Texinfo input format, La@TeX{} input
format, @acronym{SGML} or @acronym{XML} using a publicly available
@acronym{DTD}, and standard-conforming simple @acronym{HTML},
PostScript or @acronym{PDF} designed for human modification. Examples
of transparent image formats include @acronym{PNG}, @acronym{XCF} and
@acronym{JPG}. Opaque formats
 include proprietary formats that can be
read and edited only by proprietary word processors, @acronym{SGML} or
@acronym{XML} for which the @acronym{DTD} and/or processing tools are
not generally available, and the machine-generated @acronym{HTML},
PostScript or @acronym{PDF} produced by some word processors for
output purposes only.

The ``Title Page'' means, for a printed book, the title page itself,
plus such following pages as are needed to hold, legibly, the material
this License requires to appear in the title page. For works in
formats which do not have any title page as such, ``Title Page'' means
the text near the most prominent appearance of the work's title,
preceding the beginning of the body of the text.

The ``publisher'' means any person or entity that distributes copies
of the Document to the public.

A section ``Entitled XYZ'' means a named subunit of the Document whose
title either is precisely XYZ or contains XYZ in parentheses following
text that translates XYZ in
 another language. (Here XYZ stands for a
specific section name mentioned below, such as ``Acknowledgements'',
``Dedications'', ``Endorsements'', or ``History''.)  To ``Preserve the Title''
of such a section when you modify the Document means that it remains a
section ``Entitled XYZ'' according to this definition.

The Document may include Warranty Disclaimers next to the notice which
states that this License applies to the Document. These Warranty
Disclaimers are considered to be included by reference in this
License, but only as regards disclaiming warranties: any other
implication that these Warranty Disclaimers may have is void and has
no effect on the meaning of this License.

@item
VERBATIM COPYING

You may copy and distribute the Document in any medium, either
commercially or noncommercially, provided that this License, the
copyright notices, and the license notice saying this License applies
to the Document are reproduced in all copies, and that you add no other
conditions whatsoever

to those of this License. You may not use
technical measures to obstruct or control the reading or further
copying of the copies you make or distribute. However, you may accept
compensation in exchange for copies. If you distribute a large enough
number of copies you must also follow the conditions in section 3.

You may also lend copies, under the same conditions stated above, and
you may publicly display copies.

@item
COPYING IN QUANTITY

If you publish printed copies (or copies in media that commonly have
printed covers) of the Document, numbering more than 100, and the
Document's license notice requires Cover Texts, you must enclose the
copies in covers that carry, clearly and legibly, all these Cover
Texts: Front-Cover Texts on the front cover, and Back-Cover Texts on
the back cover. Both covers must also clearly and legibly identify
you as the publisher of these copies. The front cover must present
the full title with all words of the title equally prominent and
visible.
You may add other material on the covers in addition.
Copying with changes limited to the covers, as long as they preserve
the title of the Document and satisfy these conditions, can be treated
as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit
legibly, you should put the first ones listed (as many as fit
reasonably) on the actual cover, and continue the rest onto adjacent
pages.

If you publish or distribute Opaque copies of the Document numbering
more than 100, you must either include a machine-readable Transparent
copy along with each Opaque copy, or state in or with each Opaque copy
a computer-network location from which the general network-using
public has access to download using public-standard network protocols
a complete Transparent copy of the Document, free of added material.
If you use the latter option, you must take reasonably prudent steps,
when you begin distribution of Opaque copies in quantity, to ensure
that
this Transparent copy will remain thus accessible at the stated
location until at least one year after the last time you distribute an
Opaque copy (directly or through your agents or retailers) of that
edition to the public.

It is requested, but not required, that you contact the authors of the
Document well before redistributing any large number of copies, to give
them a chance to provide you with an updated version of the Document.

@item
MODIFICATIONS

You may copy and distribute a Modified Version of the Document under
the conditions of sections 2 and 3 above, provided that you release
the Modified Version under precisely this License, with the Modified
Version filling the role of the Document, thus licensing distribution
and modification of the Modified Version to whoever possesses a copy
of it. In addition, you must do these things in the Modified Version:

@enumerate A
@item
Use in the Title Page (and on the covers, if any) a title distinct
from that of the Document, and from
 those of previous versions
(which should, if there were any, be listed in the History section
of the Document). You may use the same title as a previous version
if the original publisher of that version gives permission.

@item
List on the Title Page, as authors, one or more persons or entities
responsible for authorship of the modifications in the Modified
Version, together with at least five of the principal authors of the
Document (all of its principal authors, if it has fewer than five),
unless they release you from this requirement.

@item
State on the Title page the name of the publisher of the
Modified Version, as the publisher.

@item
Preserve all the copyright notices of the Document.

@item
Add an appropriate copyright notice for your modifications
adjacent to the other copyright notices.

@item
Include, immediately after the copyright notices, a license notice
giving the public permission to use the Modified Version under the
terms of this License, in the form shown in
 the Addendum below.

@item
Preserve in that license notice the full lists of Invariant Sections
and required Cover Texts given in the Document's license notice.

@item
Include an unaltered copy of this License.

@item
Preserve the section Entitled ``History'', Preserve its Title, and add
to it an item stating at least the title, year, new authors, and
publisher of the Modified Version as given on the Title Page. If
there is no section Entitled ``History'' in the Document, create one
stating the title, year, authors, and publisher of the Document as
given on its Title Page, then add an item describing the Modified
Version as stated in the previous sentence.

@item
Preserve the network location, if any, given in the Document for
public access to a Transparent copy of the Document, and likewise
the network locations given in the Document for previous versions
it was based on. These may be placed in the ``History'' section.
You may omit a network location for a work that was published at
least
four years before the Document itself, or if the original
publisher of the version it refers to gives permission.

@item
For any section Entitled ``Acknowledgements'' or ``Dedications'', Preserve
the Title of the section, and preserve in the section all the
substance and tone of each of the contributor acknowledgements and/or
dedications given therein.

@item
Preserve all the Invariant Sections of the Document,
unaltered in their text and in their titles. Section numbers
or the equivalent are not considered part of the section titles.

@item
Delete any section Entitled ``Endorsements''. Such a section
may not be included in the Modified Version.

@item
Do not retitle any existing section to be Entitled ``Endorsements'' or
to conflict in title with any Invariant Section.

@item
Preserve any Warranty Disclaimers.
@end enumerate

If the Modified Version includes new front-matter sections or
appendices that qualify as Secondary Sections and contain no material
copied from the Document,

you may at your option designate some or all
of these sections as invariant. To do this, add their titles to the
list of Invariant Sections in the Modified Version's license notice.
These titles must be distinct from any other section titles.

You may add a section Entitled ``Endorsements'', provided it contains
nothing but endorsements of your Modified Version by various
parties---for example, statements of peer review or that the text has
been approved by an organization as the authoritative definition of a
standard.

You may add a passage of up to five words as a Front-Cover Text, and a
passage of up to 25 words as a Back-Cover Text, to the end of the list
of Cover Texts in the Modified Version. Only one passage of
Front-Cover Text and one of Back-Cover Text may be added by (or
through arrangements made by) any one entity. If the Document already
includes a cover text for the same cover, previously added by you or
by arrangement made by the same entity you are acting on behalf
of,
you may not add another; but you may replace the old one, on explicit
permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License
give permission to use their names for publicity for or to assert or
imply endorsement of any Modified Version.

@item
COMBINING DOCUMENTS

You may combine the Document with other documents released under this
License, under the terms defined in section 4 above for modified
versions, provided that you include in the combination all of the
Invariant Sections of all of the original documents, unmodified, and
list them all as Invariant Sections of your combined work in its
license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and
multiple identical Invariant Sections may be replaced with a single
copy. If there are multiple Invariant Sections with the same name but
different contents, make the title of
each such section unique by
adding at the end of it, in parentheses, the name of the original
author or publisher of that section if known, or else a unique number.
Make the same adjustment to the section titles in the list of
Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections Entitled ``History''
in the various original documents, forming one section Entitled

``History''; likewise combine any sections Entitled ``Acknowledgements'',
and any sections Entitled ``Dedications''. You must delete all
sections Entitled ``Endorsements.''

@item
COLLECTIONS OF DOCUMENTS

You may make a collection consisting of the Document and other documents
released under this License, and replace the individual copies of this
License in the various documents with a single copy that is included in
the collection, provided that you follow the rules of this License for
verbatim copying of each of the documents in all other respects.

You may extract
 a single document from such a collection, and distribute
it individually under this License, provided you insert a copy of this
License into the extracted document, and follow this License in all
other respects regarding verbatim copying of that document.

@item
AGGREGATION WITH INDEPENDENT WORKS

A compilation of the Document or its derivatives with other separate
and independent documents or works, in or on a volume of a storage or
distribution medium, is called an ``aggregate'' if the copyright
resulting from the compilation is not used to limit the legal rights
of the compilation's users beyond what the individual works permit.
When the Document is included in an aggregate, this License does not
apply to the other works in the aggregate which are not themselves
derivative works of the Document.

If the Cover Text requirement of section 3 is applicable to these
copies of the Document, then if the Document is less than one half of
the entire aggregate, the Document's Cover Texts may
 be placed on
covers that bracket the Document within the aggregate, or the
electronic equivalent of covers if the Document is in electronic form.
Otherwise they must appear on printed covers that bracket the whole
aggregate.

@item
TRANSLATION

Translation is considered a kind of modification, so you may
distribute translations of the Document under the terms of section 4.
Replacing Invariant Sections with translations requires special
permission from their copyright holders, but you may include
translations of some or all Invariant Sections in addition to the

original versions of these Invariant Sections. You may include a
translation of this License, and all the license notices in the
Document, and any Warranty Disclaimers, provided that you also include
the original English version of this License and the original versions
of those notices and disclaimers. In case of a disagreement between
the translation and the original version of this License or a notice
or disclaimer, the original
 version will prevail.

If a section in the Document is Entitled ``Acknowledgements'',
``Dedications'', or ``History'', the requirement (section 4) to Preserve
its Title (section 1) will typically require changing the actual
title.

@item
TERMINATION

You may not copy, modify, sublicense, or distribute the Document
except as expressly provided under this License. Any attempt
otherwise to copy, modify, sublicense, or distribute it is void, and
will automatically terminate your rights under this License.

However, if you cease all violation of this License, then your license
from a particular copyright holder is reinstated (a) provisionally,
unless and until the copyright holder explicitly and finally
terminates your license, and (b) permanently, if the copyright holder
fails to notify you of the violation by some reasonable means prior to
60 days after the cessation.

Moreover, your license from a particular copyright holder is
reinstated permanently if the copyright holder notifies
 you of the
violation by some reasonable means, this is the first time you have
received notice of violation of this License (for any work) from that
copyright holder, and you cure the violation prior to 30 days after
your receipt of the notice.

Termination of your rights under this section does not terminate the
licenses of parties who have received copies or rights from you under
this License. If your rights have been terminated and not permanently
reinstated, receipt of a copy of some or all of the same material does
not give you any rights to use it.

@item
FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions
of the GNU Free Documentation License from time to time. Such new

versions will be similar in spirit to the present version, but may
differ in detail to address new problems or concerns. See
@uref{http://www.gnu.org/copyleft/}.

Each version of the License is given a distinguishing version number.
If the Document specifies that
 a particular numbered version of this
License ``or any later version'' applies to it, you have the option of
following the terms and conditions either of that specified version or
of any later version that has been published (not as a draft) by the
Free Software Foundation. If the Document does not specify a version
number of this License, you may choose any version ever published (not
as a draft) by the Free Software Foundation. If the Document
specifies that a proxy can decide which future versions of this
License can be used, that proxy's public statement of acceptance of a
version permanently authorizes you to choose that version for the
Document.

@item
RELICENSING

``Massive Multiauthor Collaboration Site'' (or ``MMC Site'') means any
World Wide Web server that publishes copyrightable works and also
provides prominent facilities for anybody to edit those works. A
public wiki that anybody can edit is an example of such a server. A
``Massive Multiauthor Collaboration'' (or ``MMC'')
 contained in the
site means any set of copyrightable works thus published on the MMC
site.

``CC-BY-SA'' means the Creative Commons Attribution-Share Alike 3.0
license published by Creative Commons Corporation, a not-for-profit
corporation with a principal place of business in San Francisco,
California, as well as future copyleft versions of that license
published by that same organization.

``Incorporate'' means to publish or republish a Document, in whole or
in part, as part of another Document.

An MMC is ``eligible for relicensing'' if it is licensed under this
License, and if all works that were first published under this License
somewhere other than this MMC, and subsequently incorporated in whole
or in part into the MMC, (1) had no cover texts or invariant sections,
and (2) were thus incorporated prior to November 1, 2008.

The operator of an MMC Site may republish an MMC contained in the site
under CC-BY-SA on the same site at any time before August 1, 2009,
provided the

MMC is eligible for relicensing.

@end enumerate

@page
@heading ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of
the License in the document and put the following copyright and
license notices just after the title page:

@smallexample
@group
 Copyright (C) @var{year} @var{your name}.
 Permission is granted to copy, distribute and/or modify this document
 under the terms of the GNU Free Documentation License, Version 1.3
 or any later version published by the Free Software Foundation;
 with no Invariant Sections, no Front-Cover Texts, and no Back-Cover
 Texts. A copy of the license is included in the section entitled ``GNU
 Free Documentation License".
@end group
@end smallexample

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts,
replace the ``with@dots{}Texts." line with this:

@smallexample
@group
   with the Invariant Sections being @var{list their titles}, with
   the Front-Cover
 Texts being @var{list}, and with the Back-Cover Texts
   being @var{list}.
@end group
@end smallexample

If you have Invariant Sections without Cover Texts, or some other
combination of the three, merge those two alternatives to suit the
situation.

If your document contains nontrivial examples of program code, we
recommend releasing these examples in parallel under your choice of
free software license, such as the GNU General Public License,
to permit their use in free software.

@c Local Variables:
@c ispell-local-pdict: "ispell-dict"
@c End:

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <http://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as

changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand
ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees"
and
"recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without

permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally

available free
programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered
by this License only if the output, given its
content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed;
section 10
makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or

similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately
publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated

place (gratis or for a charge), and offer equivalent access to the Corresponding Source in
the same way through the same place at no
further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source
as a System Library, need not be
included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization
keys, or other information required to install
and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the

User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in
ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the
entire Program shall
be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty or

limiting liability differently from the
terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or
author attributions in that material or in the Appropriate Legal
Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or
requiring that modified versions of such material be marked in
reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or
authors of the material; or

e) Declining to grant rights under trademark law for use of some
trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that
material by anyone who conveys the material (or modified versions of
it) with contractual assumptions of liability to the recipient, for
any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further
restrictions" within the meaning of section 10. If the Program as you
received it, or any part of it, contains a notice stating that it is
governed by this License along with a term that is a further
restriction, you may remove that term. If a license document contains
a further restriction but permits relicensing or conveying under this
License, you may add to a covered work material governed by the terms
of that license document, provided that the further restriction does
not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you
must place, in the relevant source files, a statement of the
additional terms that apply to those files, or a notice indicating
where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the
form of a separately written license, or stated as exceptions;
the above
requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly
provided under this License. Any attempt otherwise to propagate or

modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright
holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that

transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For
purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this

License, through a
publicly available network server or other readily accessible means,
then you must either (1) cause the Corresponding Source to be so
available, or (2) arrange to deprive yourself of the benefit of the
patent license for this particular work, or (3) arrange, in a manner
consistent with the requirements of this License, to extend the patent
license to downstream recipients. "Knowingly relying" means you have
actual knowledge that, but for the patent license, your conveying the
covered work in a country, or your recipient's use of the covered work
in a country, would infringe one or more identifiable patents in that
country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or
arrangement, you convey, or propagate by procuring conveyance of, a
covered work, and grant a patent license to some of the parties
receiving the covered work authorizing them to use, propagate, modify
or convey a specific copy of the covered
work, then the patent license
you grant is automatically extended to all recipients of the covered
work and works based on it.

A patent license is "discriminatory" if it does not include within
the scope of its coverage, prohibits the exercise of, or is
conditioned on the non-exercise of one or more of the rights that are
specifically granted under this License. You may not convey a covered
work if you are a party to an arrangement with a third party that is
in the business of distributing software, under which you make payment
to the third party based on the extent of your activity of conveying
the work, and under which the third party grants, to any of the
parties who would receive the covered work from you, a discriminatory
patent license (a) in connection with copies of the covered work
conveyed by you (or copies made from those copies), or (b) primarily
for and in connection with specific products or compilations that
contain the covered work, unless you entered into that arrangement,
or
that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting
any implied license or other defenses to infringement that may
otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot convey a
covered work so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you may

not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the
option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS"

WITHOUT WARRANTY
OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by

the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <http://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<http://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want to
do, use the GNU Lesser General
Public License instead of this License. But first, please read
<http://www.gnu.org/philosophy/why-not-lgpl.html>.
Unless otherwise stated, all files in this directory are Copyright (C)
1991,1992,1993,1994,1995,1996,1997,1998,1999,2000,2001,2002,2003,
2004,2005,2006,2007,2008,2009,2010,2011
Free Software Foundation, Inc.

See the file COPYING in the bash distribution root directory for copying
and usage restrictions.

The file ifs-posix.tests is Copyright (C) 2005 Glen Fowler.

1.143 common 0.65.0

1.143.1 Available under license :

ISC

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the

editorial
revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License,
each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

1.144 aws-sdk-go-v2-service-internal-endpoint-discovery 1.11.6

1.144.1 Available under license :

GetLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID

```
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
  OperationDeserializer
  InterceptBeforeDeserialization
  AddTimeOffsetMiddleware
  RecordResponseTiming
  RequestResponseLogger
  InterceptTransmit
name: License Scan

on: [pull_request]

jobs:
 licensescan:
   name: License Scan
   runs-on: ubuntu-latest
   strategy:
     matrix:
       python-version: [3.9]

   steps:
     - name: Checkout target
```

```
      uses: actions/checkout@v2
      with:
        path: sdkbase
        ref: ${{ github.base_ref }}
    - name: Checkout this ref
      uses: actions/checkout@v2
      with:
        path: new-ref
        fetch-depth: 0
    - name: Get Diff
      run: git --git-dir ./new-ref/.git diff --name-only --diff-filter=ACMRT ${{ github.event.pull_request.base.sha }}
${{ github.sha }} > refDiffFiles.txt
    - name: Get Target Files
      run: git --git-dir ./sdkbase/.git ls-files | grep -xf refDiffFiles.txt - > targetFiles.txt
    - name: Checkout scancode
      uses: actions/checkout@v2
      with:
        repository: nexB/scancode-toolkit
        path: scancode-toolkit
        fetch-depth: 1
    - name: Set up Python ${{ matrix.python-version }}
      uses: actions/setup-python@v2
      with:
        python-version: ${{ matrix.python-version }}
    # ScanCode
    - name: Self-configure scancode
      working-directory: ./scancode-toolkit
      run: ./scancode --help
    - name: Run Scan code on target
      run: cat targetFiles.txt | while read filename; do echo ./sdkbase/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> old-licenses.txt
    - name: Run Scan code on pr ref
      run: cat refDiffFiles.txt | while read filename; do echo ./new-ref/$filename; done | xargs ./scancode-
toolkit/scancode -l -n 30 --json-pp - | grep short_name | sort | uniq >> new-licenses.txt
    # compare
    - name: License test
      run: if ! cmp old-licenses.txt new-licenses.txt; then echo "Licenses differ! Failing."; exit -1; else echo "Licenses
are the same. Success."; exit 0; fi
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
```

```
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Creates a license.
func (c *Client) CreateLicense(ctx context.Context, params *CreateLicenseInput, optFns ...func(*Options))
(*CreateLicenseOutput, error) {
 if params == nil {
  params = &CreateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CreateLicense", params, optFns,
c.addOperationCreateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CreateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CreateLicenseInput struct {

 // License beneficiary.
 //
 // This member is required.
 Beneficiary *string

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 //
 This member is required.
 ClientToken *string

 // Configuration for consumption of the license. Choose a provisional
 // configuration for workloads running with continuous connectivity. Choose a
 // borrow configuration for workloads with offline usage.
 //
 // This member is required.
 ConsumptionConfiguration *types.ConsumptionConfiguration

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.Entitlement

 // Home Region for the license.
```

```
//
// This member is required.
HomeRegion *string

// License issuer.
//
// This member is required.
Issuer *types.Issuer

// License name.
//
// This member is required.
LicenseName *string

// Product name.
//
// This member is required.
ProductName *string

// Product SKU.
//
// This member is required.
ProductSKU *string

// Date and time range during which the license is valid, in ISO8601-UTC format.
//
// This member is required.
Validity *types.DatetimeRange

// Information about
the license.
LicenseMetadata []types.Metadata

// Tags to add to the license. For more information about tagging support in
// License Manager, see the [TagResource]operation.
//
// [TagResource]: https://docs.aws.amazon.com/license-manager/latest/APIReference/API_TagResource.html
Tags []types.Tag

noSmithyDocumentSerde
}

type CreateLicenseOutput struct {

// Amazon Resource Name (ARN) of the license.
LicenseArn *string

// License status.
```

```
 Status types.LicenseStatus

 // License version.
 Version *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCreateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCreateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCreateLicense{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CreateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
```

```
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err
 = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCreateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCreateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return
```

```
err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return
err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
if err = addSpanInitializeEnd(stack); err != nil {
 return err
}
if err = addSpanBuildRequestStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCreateLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
  OperationName: "CreateLicense",
 }
}
CheckoutBorrowLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
```

setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListReceivedLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity

ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
CheckoutLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry

InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit


```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>You don't have sufficient access to perform this action.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider": {
      "type": "structure",
      "members": {
        "DirectoryId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Directory",
          "traits": {
            "smithy.api#documentation": "<p>The directory ID for an Active Directory identity provider.</p>"
          }
        },
```

```
        "ActiveDirectorySettings":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectorySettings</code> resource contains
details about \n\t\t\tthe Active Directory, including network access details such as domain name and IP
\n\t\t\taddresses, and the credential provider for user administration.</p>"
            }
          },
          "ActiveDirectoryType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType",
            "traits": {
              "smithy.api#documentation": "<p>The type of Active Directory  either a self-managed Active
Directory or an \n\t\t\tAmazon Web Services Managed Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details about an Active Directory identity
 provider.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectorySettings": {
        "type": "structure",
        "members": {
          "DomainName": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name for the Active Directory.</p>"
            }
          },
          "DomainIpv4List": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4List",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the Active
Directory.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 2
              }
            }
          },
          "DomainCredentialsProvider": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Points to the <code>CredentialsProvider</code> resource that
contains \n\t\t\tinformation about the credential provider for user administration.</p>"
```

```
            }
          },
          "DomainNetworkSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>DomainNetworkSettings</code> resource contains an
array of \n\t\t\tsubnets that apply for the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network access and credential details that are needed for
\n\t\t\tuser administration in the Active Directory.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryType":
{
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "SELF_MANAGED",
              "value": "SELF_MANAGED",
              "documentation": "SELF_MANAGED type of Active Directory"
            },
            {
              "name": "AWS_MANAGED",
              "value": "AWS_MANAGED",
              "documentation": "AWS_MANAGED type of Active Directory"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Arn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-
zA-Z0-9-\\.]{1,510}/[a-zA-Z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUser":
{
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse"
```

```
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
           },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Associates the user to an EC2 instance to utilize user-based subscriptions.</p>\n        <note>\n          <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For more information, see <a href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http":
{
            "code": 200,
            "method": "POST",
            "uri": "/user/AssociateUser"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider.</p>",
              "smithy.api#required": {}
```

```
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides the user-based subscription.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to associate.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the user association.</p>"
            }
          }
        },
        "traits": {

      "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#AssociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
```

```
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#BoxInteger": {
        "type": "integer"
    },
    "com.amazonaws.licensemanagerusersubscriptions#ConflictException": {
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
             }
        },
        "traits": {
            "smithy.api#documentation": "<p>The request couldn't be completed because it conflicted with the current state of the\n\t\t\tresource.</p>",
            "smithy.api#error": "server"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },

          {
                "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Creates a network endpoint for the Remote Desktop Services (RDS) license server.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/license-server/CreateLicenseServerEndpoint"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointRequest": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the <code>IdentityProvider</code> resource that contains details \n\t\t\tabout a registered identity provider. In the case of Active Directory, that can be \n\t\t\ta self-managed Active Directory or an Amazon Web Services Managed Active Directory that contains user identity details.</p>",
              "smithy.api#required": {}
            }
          },
          "LicenseServerSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>LicenseServerSettings</code> resource to create for the endpoint. The \n\t\t\tsettings include the type of license server and the Secrets Manager secret that \n\t\t\tenables administrators to add or remove users associated with the \n\t\t\tlicense server.</p>",
              "smithy.api#required": {}
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply for the license server endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpointResponse":
```

```
{
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider
specified in the request.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>LicenseServerEndpoint</code>
resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider": {
        "type": "union",
        "members": {
          "SecretsManagerCredentialsProvider":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider",
            "traits": {
              "smithy.api#documentation": "<p>Identifies the Secrets Manager secret that contains credentials
needed for \n\t\t\tuser administration in the Active Directory.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains information about the credential provider for user
\n\t\t\tadministration.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse"
         },
        "errors": [
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"

}
         ],
         "traits": {
            "smithy.api#documentation": "<p>Deletes a <code>LicenseServerEndpoint</code> resource.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/license-server/DeleteLicenseServerEndpoint"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointRequest": {
         "type": "structure",
         "members": {
            "LicenseServerEndpointArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the
<code>LicenseServerEndpoint</code> \n\t\t\tresource to delete.</p>",
                  "smithy.api#required": {}
               }
            },
             "ServerType": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
               "traits": {
                  "smithy.api#documentation": "<p>The type of License Server that the delete request refers to.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpointResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoint": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint",
              "traits": {
                "smithy.api#documentation": "<p>Shows details from the <code>LicenseServerEndpoint</code>
resource that was deleted.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Deregisters the Active Directory identity provider from License
Manager user-based subscriptions.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/DeregisterIdentityProvider"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderRequest":
{
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the Active Directory identity
provider.</p>"
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProviderArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the identity
provider to deregister.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProviderResponse": {
      "type": "structure",
      "members": {
        "IdentityProviderSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
          "traits": {
            "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider
operation.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}

  }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Directory": {
      "type": "string",
      "traits": {
        "smithy.api#pattern": "^(d|sd)-[0-9a-f]{10}$"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Disassociates the user from an EC2 instance providing user-based
subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/user/DisassociateUser"
            },
            "smithy.api#idempotent": {}

    }
    },
    "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the Active Directory identity provider for the
user.</p>"
                }
            },
            "InstanceId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The ID of the EC2 instance which provides user-based
subscriptions.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the Active
 Directory identity provider.</p>"
                }
            },
            "InstanceUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the user to disassociate
from the EC2 instance.</p>"
```

```
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains information for the user to disassociate.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DisassociateUserResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummary":
{
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the associate user operation.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#DomainNetworkSettings": {
        "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>Contains a list of subnets that apply for the Active Directory domain.</p>",
              "smithy.api#length": {
                "min": 1
              },

    "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Contains network settings for the Active Directory domain.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Attribute": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of an attribute to use as a filter.</p>"
            }
          },
          "Operation": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of search (For example, eq, geq, leq)</p>"
            }
          },
          "Value": {
            "target": "smithy.api#String",
            "traits":
{
              "smithy.api#documentation": "<p>Value of the filter.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter name and value pair that is used to return more specific results
from a describe\n\t\t\tor list operation. You can use filters can be used to match a set of resources by specific
\n\t\t\tcriteria, such as tags, attributes, or IDs.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#FilterList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider": {
        "type": "union",
        "members": {
          "ActiveDirectoryIdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ActiveDirectoryIdentityProvider",
             "traits": {
              "smithy.api#documentation": "<p>The <code>ActiveDirectoryIdentityProvider</code> resource
contains settings \n\t\t\tand other details about a specific Active Directory identity provider.</p>"
            }
          }
        },
```

```
        "traits": {
            "smithy.api#documentation": "<p>Refers to an identity provider.</p>"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary": {
        "type": "structure",
        "members": {
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource contains information
about \n\t\t\tan identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
             "Settings": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
                "traits": {
                    "smithy.api#documentation": "<p>The <code>Settings</code> resource contains details about the
registered \n\t\t\tidentity providers product related configuration settings, such as the \n\t\t\tsubnets to provision VPC
endpoints.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of the
 identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProviderArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider.</p>"
                }
            },
            "FailureMessage": {
                "target": "smithy.api#String",
                "traits": {
```

```
                "smithy.api#documentation": "<p>The failure message associated with an identity provider.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Describes an identity provider.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList": {
          "type": "list",
          "member": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary": {
          "type": "structure",
          "members": {
            "InstanceId": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "Status": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The status of an EC2 instance resource.</p>",
                "smithy.api#required": {}
              }
            },
            "Products": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#StringList",
               "traits": {
                "smithy.api#documentation": "<p>A list of provided user-based subscription products.</p>",
                "smithy.api#required": {}
              }
            },
            "LastStatusCheckDate": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The date of the last status check.</p>"
              }
            },
            "StatusMessage": {
              "target": "smithy.api#String",
```

```
            "traits": {
                "smithy.api#documentation": "<p>The status message for an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes an EC2 instance providing user-based subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList":
{
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>",
              "smithy.api#required": {}
            }
          },
          "InstanceId": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the EC2 instance that provides user-based
subscriptions.</p>",
              "smithy.api#required": {}
            }
          },

      "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>The <code>IdentityProvider</code> resource specifies details
\n\t\t\tabout the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Status": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status of a user associated with an EC2 instance.</p>",
              "smithy.api#required": {}
```

```
            }
          },
          "InstanceUserArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) that identifies the instance
user.</p>"
             }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The status message for users of an EC2 instance.</p>"
            }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
information for the product subscription.</p>"
            }
          },
          "AssociationDate": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The date a user was associated with an EC2 instance.</p>"
            }
          },
          "DisassociationDate": {
            "target": "smithy.api#String",
             "traits": {
              "smithy.api#documentation": "<p>The date a user was disassociated from an EC2 instance.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Describes users of an EC2 instance providing user-based
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummary"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#InternalServerException": {
        "type": "structure",
```

```
    "members": {
        "message": {
            "target": "smithy.api#String"
        }
    },
    "traits": {
        "smithy.api#documentation": "<p>An exception occurred with the service.</p>",
         "smithy.api#error": "server",
        "smithy.api#httpError": 500
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4": {
    "type": "string",
    "traits": {
        "smithy.api#pattern": "^(?:(25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9][0-9]|[0-9])(\\.(?!$)|$)){4}$"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#IpV4List": {
    "type": "list",
    "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#IpV4"
    }
},
"com.amazonaws.licensemanagerusersubscriptions#LicenseManagerUserSubscriptions": {
    "type": "service",
    "version": "2018-05-10",
    "operations": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AssociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#CreateLicenseServerEndpoint"
         },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeleteLicenseServerEndpoint"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DeregisterIdentityProvider"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#DisassociateUser"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstances"
        },
```

```
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResource"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResource"
        },
        {

"target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager User Subscriptions",
          "arnNamespace": "license-manager-user-subscriptions",
          "cloudTrailEventSource": "license-manager-user-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-user-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
```

```
                "x-amzn-platform-id",
                "x-amzn-trace-id",
                "content-length",

            "x-api-key",
                "authorization",
                "x-amz-date",
                "x-amz-security-token",
                "Access-Control-Allow-Headers",
                "Access-Control-Allow-Methods",
                "Access-Control-Allow-Origin"
            ],
            "additionalExposedHeaders": [
                "x-amzn-errortype",
                "x-amzn-requestid",
                "x-amzn-trace-id"
            ]
          },
          "smithy.api#documentation": "<p>With License Manager, you can create user-based subscriptions to utilize licensed software with\n\t\ta per user subscription fee on Amazon EC2 instances.</p>",
          "smithy.api#title": "AWS License Manager User Subscriptions",
          "smithy.rules#endpointRuleSet": {
            "version": "1.0",
            "parameters": {
              "Region":
{
                "builtIn": "AWS::Region",
                "required": false,
                "documentation": "The AWS region used to dispatch the request.",
                "type": "String"
              },
              "UseDualStack": {
                "builtIn": "AWS::UseDualStack",
                "required": true,
                "default": false,
                "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not support dual-stack, dispatching the request MAY return an error.",
                "type": "Boolean"
              },
              "UseFIPS": {
                "builtIn": "AWS::UseFIPS",
                "required": true,
                "default": false,
                "documentation": "When true, send this request to the FIPS-compliant
 regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
                "type": "Boolean"
              },
```

```
    "Endpoint": {
      "builtIn": "SDK::Endpoint",
      "required": false,
      "documentation": "Override the endpoint used to send this request",
      "type": "String"
    }
  },
  "rules": [
    {
      "conditions": [
        {
          "fn": "isSet",
          "argv": [
            {
              "ref": "Endpoint"
            }
          ]
        }
      ],
      "rules": [
        {
          "conditions": [
            {
              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseFIPS"
                },
                true
              ]
            }
          ],
          "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
          "type": "error"
        },
        {
          "conditions": [
            {

              "fn": "booleanEquals",
              "argv": [
                {
                  "ref": "UseDualStack"
                },
                true
              ]
            }
          ],
```

```
                "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
                "endpoint": {
                  "url": {
                    "ref": "Endpoint"
                  },

 "properties": {},
                    "headers": {}
                  },
                  "type": "endpoint"
              }
            ],
            "type": "tree"
          },
          {
            "conditions": [
              {
                "fn": "isSet",
                "argv": [
                  {
                    "ref": "Region"
                  }
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {
                    "fn": "aws.partition",

                    "argv": [
                      {
                        "ref": "Region"
                      }
                    ],
                    "assign": "PartitionResult"
                  }
                ],
                "rules": [
                  {
                    "conditions": [
                      {
                        "fn": "booleanEquals",
```

```
                "argv": [
                  {
                    "ref": "UseFIPS"
                  },

true
                ]
              },
              {
                "fn": "booleanEquals",
                "argv": [
                  {
                    "ref": "UseDualStack"
                  },
                  true
                ]
              }
            ],
            "rules": [
              {
                "conditions": [
                  {

"fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
                          "supportsFIPS"
                        ]
                      }
                    ]
                  },

                {
                    "fn": "booleanEquals",
                    "argv": [
                      true,
                      {
                        "fn": "getAttr",
                        "argv": [
                          {
                            "ref": "PartitionResult"
                          },
```

```
                                    "supportsDualStack"
                                ]
                            }

                ]
                    }
                ],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }

    ],
                "type": "tree"
            },
            {
                "conditions": [],
                "error": "FIPS and DualStack are enabled, but this partition does not support one or
both",
                "type": "error"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [
            {
                "fn": "booleanEquals",
                "argv": [

  {
                        "ref": "UseFIPS"
                    },
                    true
                ]
            }
        ],
        "rules": [
            {
                "conditions": [
                    {
```

```
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "fn": "getAttr",
                                        "argv": [

                        {
                                                "ref": "PartitionResult"
                                            },
                                            "supportsFIPS"
                                        ]
                                    },
                                    true
                                ]
                            }
                        ],
                        "rules": [
                            {
                                "conditions": [],
                                "endpoint": {

                "url": "https://license-manager-user-subscriptions-fips.{Region}.{PartitionResult#dnsSuffix}",
                                    "properties": {},
                                    "headers": {}
                                },
                                "type": "endpoint"
                            }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "FIPS is enabled but this partition does not support FIPS",
                        "type": "error"

}
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true
```

```
                ]
              }
            ],
            "rules": [
              {

      "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        true,
                        {
                          "fn": "getAttr",
                          "argv": [
                            {
                              "ref": "PartitionResult"
                            },
                            "supportsDualStack"
                          ]

       }
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [],
                      "endpoint": {
                        "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                        "properties": {},
                        "headers": {}
                      },
                      "type": "endpoint"
                    }

                ],
                  "type": "tree"
                },
                {
                  "conditions": [],
                  "error": "DualStack is enabled but this partition does not support DualStack",
                  "type": "error"
                }
              ],
              "type": "tree"
            },
            {
```

```
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-user-
subscriptions.{Region}.{PartitionResult#dnsSuffix}",

                    "properties": {},
                                "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"
            }
        ],
        "type": "tree"
    },
    {
        "conditions": [],
        "error": "Invalid Configuration: Missing Region",
        "type": "error"
    }
  ]
},
"smithy.rules#endpointTests": {
  "testCases": [
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
      "expect":
{
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-east-1",
```

```
        "UseFIPS": true,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions.us-east-1.api.aws"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true
                }
            },
            {
                "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
                "expect": {
                    "endpoint":
{
                        "url": "https://license-manager-user-subscriptions.us-east-1.amazonaws.com"
                    }
                },
                "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": false
                }
            },
            {
                "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
                "expect": {
                    "endpoint": {
                        "url": "https://license-manager-user-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
                    }
                },
                "params": {
                    "Region": "cn-north-1",
                    "UseFIPS":
 true,
                    "UseDualStack": true
                }
            },
            {
```

```
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint":
{
          "url": "https://license-manager-user-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions.cn-north-1.amazonaws.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": false,
         "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
```

```
            "UseFIPS": true,
            "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
{
              "url": "https://license-manager-user-subscriptions-fips.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": true,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.api.aws"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
             "UseDualStack": true
          }
        },
        {
          "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
          "expect": {
            "endpoint": {
              "url": "https://license-manager-user-subscriptions.us-gov-east-1.amazonaws.com"
            }
          },
          "params": {
            "Region": "us-gov-east-1",
            "UseFIPS": false,
            "UseDualStack": false
          }
        },
        {
          "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
          "expect": {
            "endpoint":
```

```
{
                    "url": "https://license-manager-user-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
                }
            },
            "params": {
                "Region": "us-iso-east-1",
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions.us-iso-east-1.c2s.ic.gov"
                }
            },
            "params": {
                "Region": "us-iso-east-1",
                "UseFIPS": false,
                 "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
                "endpoint": {
                    "url": "https://license-manager-user-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
                }
            },
            "params": {
                "Region": "us-isob-east-1",
                "UseFIPS": true,
                "UseDualStack": false
            }
        },
        {
            "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
                "endpoint":
{
                    "url": "https://license-manager-user-subscriptions.us-isob-east-1.sc2s.sgov.gov"
                }
            },
            "params": {
                "Region": "us-isob-east-1",
                "UseFIPS": false,
                "UseDualStack": false
```

```
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack":
false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error":
"Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips disabled and dualstack enabled",
      "expect": {
        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
```

```
                },
                "params": {
                  "Region": "us-east-1",
                  "UseFIPS": false,
                  "UseDualStack": true,
                  "Endpoint": "https://example.com"
                }
              },
              {
                "documentation": "Missing region",
                "expect": {
                  "error": "Invalid Configuration: Missing Region"
                }
              }
            ],
            "version": "1.0"
          }
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServer": {
        "type": "structure",
        "members": {
          "ProvisioningStatus": {
            "target":
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
            "traits": {
              "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS
\n\t\t\tlicense server.</p>"
            }
          },
          "HealthStatus": {
            "target":
 "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus",
            "traits": {
              "smithy.api#documentation": "<p>The health status of the RDS license server.</p>"
            }
          },
          "Ipv4Address": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A list of domain IPv4 addresses that are used for the RDS
\n\t\t\tlicense server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Information about a Remote Desktop Services (RDS) license
server.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint": {
        "type": "structure",
        "members": {
          "IdentityProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider that's
associated with \n\t\t\tthe RDS license server endpoint.</p>"
            }
          },
          "ServerType": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
            "traits": {
              "smithy.api#documentation": "<p>The type of license server.</p>"
            }
          },
          "ServerEndpoint": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint",
            "traits": {
              "smithy.api#documentation": "<p>The <code>ServerEndpoint</code> resource contains the network
\n\t\t\taddress of the RDS license server endpoint.</p>"
            }
          },
          "StatusMessage": {
            "target": "smithy.api#String",
            "traits":
 {
              "smithy.api#documentation": "<p>The message associated with the provisioning status, if there is
one.</p>"
            }
          },
          "LicenseServerEndpointId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId",
            "traits": {
              "smithy.api#documentation": "<p>The ID of the license server endpoint.</p>"
            }
          },
          "LicenseServerEndpointArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
            "traits": {
              "smithy.api#documentation": "<p>The ARN of the <code>ServerEndpoint</code> resource for the
RDS \n\t\t\tlicense server.</p>"
            }
          },
          "LicenseServerEndpointProvisioningStatus": {
            "target":
```

```
"com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus",
                "traits": {
                  "smithy.api#documentation": "<p>The current state of the provisioning process for the RDS license \n\t\t\tserver endpoint</p>"
                }
              },
              "LicenseServers": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList",
                "traits": {
                  "smithy.api#documentation": "<p>An array of <code>LicenseServer</code> resources that represent the \n\t\t\tlicense servers that are accessed through this endpoint.</p>"
                }
              },
              "CreationTime": {
                "target": "smithy.api#Timestamp",
                "traits": {
                  "smithy.api#documentation": "<p>The timestamp when License Manager created the license server endpoint.</p>"
                }
              }
            },
            "traits": {
              "smithy.api#documentation":
 "<p>Contains details about a network endpoint for a Remote Desktop Services (RDS) \n\t\t\tlicense server.</p>"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointId": {
            "type": "string"
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList": {
            "type": "list",
            "member": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpoint"
            }
          },
          "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointProvisioningStatus": {
            "type": "string",
            "traits": {
              "smithy.api#enum": [
                {
                  "name": "PROVISIONING",
                  "value": "PROVISIONING",
                  "documentation": ""
                },
                {
                  "name": "PROVISIONING_FAILED",
```

```
            "value": "PROVISIONING_FAILED",
            "documentation": ""
          },
          {
            "name": "PROVISIONED",
            "value": "PROVISIONED",
            "documentation": ""
          },
          {
            "name": "DELETING",
            "value": "DELETING",
            "documentation": ""
          },
          {
            "name": "DELETION_FAILED",
            "value": "DELETION_FAILED",
            "documentation": ""
          },
          {
            "name": "DELETED",
            "value": "DELETED",
            "documentation": ""
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerHealthStatus": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "HEALTHY",
            "value": "HEALTHY",
            "documentation": ""
          },
          {
            "name": "UNHEALTHY",
            "value": "UNHEALTHY",
            "documentation": ""
          },
          {
            "name": "NOT_APPLICABLE",
            "value": "NOT_APPLICABLE",
            "documentation": ""
          }
        ]
      }
    },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerList": {
      "type": "list",
      "member": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServer"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#LicenseServerSettings": {
      "type": "structure",
       "members": {
        "ServerType": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerType",
          "traits": {
            "smithy.api#documentation": "<p>The type of license server.</p>",
            "smithy.api#required": {}
          }
        },
        "ServerSettings": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServerSettings",
          "traits": {
            "smithy.api#documentation": "<p>The <code>ServerSettings</code> resource contains the settings
for your \n\t\t\tserver.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The settings to configure your license server.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProviders":
{
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
```

```
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Lists the Active Directory identity providers for user-based subscriptions.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/identity-provider/ListIdentityProviders"
            },
            "smithy.api#paginated": {
                "inputToken": "NextToken",
                "outputToken": "NextToken",
                "pageSize": "MaxResults",
                "items": "IdentityProviderSummaries"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersRequest": {
        "type": "structure",
        "members": {
            "MaxResults": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
                "traits": {
                    "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>"
                }
            },
            "Filters": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
                "traits": {
                    "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n<ul>\n<li>\n<p>Product</p>\n</li>\n<li>\n<p>DirectoryId</p>\n</li>\n</ul>"
                }
            },
```

```
            "NextToken": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListIdentityProvidersResponse": {
        "type": "structure",
        "members": {
            "IdentityProviderSummaries": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummaryList",
                "traits": {
                    "smithy.api#documentation": "<p>An array of <code>IdentityProviderSummary</code> resources that contain \n\t\t\tdetails about the Active Directory identity providers that meet the request criteria.</p>",
                    "smithy.api#required": {}
                }
            },
             "NextToken": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ListInstances": {
        "type": "operation",
        "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest"
        },
        "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
```

```
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the EC2 instances providing user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/instance/ListInstances"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "InstanceSummaries"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListInstancesRequest": {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
                "smithy.api#documentation": "<p>The maximum number of results to return from a single
 request.</p>"
              }
            },
            "NextToken":
```

```
{
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n <ul>\n <li>\n <p>Status</p>\n </li>\n <li>\n <p>InstanceId</p>\n </li>\n </ul>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListInstancesResponse": {
        "type": "structure",
        "members": {
          "InstanceSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>An array of <code>InstanceSummary</code> resources that contain details \n\t\t\tabout the instances that provide user-based subscriptions and also meet the \n\t\t\trequest criteria.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output":
{}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpoints": {
        "type": "operation",
        "input": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
             },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>List the Remote Desktop Services (RDS) License Server endpoints
</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/license-server/ListLicenseServerEndpoints"
            },
            "smithy.api#paginated": {
              "inputToken": "NextToken",
              "outputToken": "NextToken",
              "pageSize": "MaxResults",
              "items": "LicenseServerEndpoints"
            }
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsRequest":
 {
          "type": "structure",
          "members": {
            "MaxResults": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The maximum number of results to return from a single request.</p>",
                "smithy.api#range": {
                  "min": 1,
                  "max": 100
                }
              }
            },
            "Filters": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
              "traits": {
                "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n<ul>\n  <li>\n    <p>IdentityProviderArn</p>\n  </li>\n</ul>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken \n\tfrom a previously truncated response.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#input": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ListLicenseServerEndpointsResponse": {
          "type": "structure",
          "members": {
            "LicenseServerEndpoints": {
              "target": "com.amazonaws.licensemanagerusersubscriptions#LicenseServerEndpointList",
              "traits": {
                "smithy.api#documentation": "<p>An array of <code>LicenseServerEndpoint</code> resources that \n\t\t\tcontain detailed information about the RDS License Servers that meet \n\t\t\tthe request criteria.</p>"
              }
            },
            "NextToken": {
              "target": "smithy.api#String",
              "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {

  "smithy.api#documentation": "<p>Lists the user-based subscription products available from an identity provider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/ListProductSubscriptions"
          },
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "ProductUserSummaries"
          }
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsRequest": {
        "type": "structure",
        "members": {
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code>
| <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>"
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n          <li>\n            <p>Status</p>\n          </li>\n          <li>\n            <p>Username</p>\n
</li>\n          <li>\n            <p>Domain</p>\n          </li>\n        </ul>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
```

```
"com.amazonaws.licensemanagerusersubscriptions#ListProductSubscriptionsResponse": {
    "type": "structure",

    "members": {
        "ProductUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList",
            "traits": {
                "smithy.api#documentation": "<p>Metadata that describes the list product subscriptions operation.</p>"
            }
        },
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
            }
        }
    },
    "traits": {
        "smithy.api#output": {}
    }
},
"com.amazonaws.licensemanagerusersubscriptions#ListTagsForResource": {

    "type": "operation",
    "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest"
    },
    "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
    ],
    "traits": {
        "smithy.api#documentation": "<p>Returns the list of tags for the specified resource.</p>",
        "smithy.api#http": {
            "method": "GET",
```

```
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#readonly": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceRequest": {
        "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource whose tags
you want to retrieve.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListTagsForResourceResponse": {
        "type": "structure",
        "members": {
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags for the specified resource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociations": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
```

```
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"

   },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
               "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Lists user associations for an identity provider.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/user/ListUserAssociations"
             },
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "InstanceUserSummaries"
            }
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsRequest": {
         "type": "structure",
         "members": {
            "InstanceId": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The ID of the EC2 instance, which provides user-based
subscriptions.</p>",
                  "smithy.api#required": {}
               }
            },
            "IdentityProvider": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
```

```
            "traits": {
              "smithy.api#documentation":
 "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum number of results to return from a single
request.</p>"
            }
          },
          "Filters": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>You can use the following filters to streamline results:</p>\n
<ul>\n        <li>\n          <p>Status</p>\n        </li>\n        <li>\n          <p>Username</p>\n
</li>\n        <li>\n          <p>Domain</p>\n        </li>\n      </ul>"

        }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This is the nextToken
\n\tfrom a previously truncated response.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ListUserAssociationsResponse": {
        "type": "structure",
        "members": {
          "InstanceUserSummaries": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InstanceUserSummaryList",
            "traits": {
              "smithy.api#documentation": "<p>Metadata that describes the list user association operation.</p>"
            }
          },
          "NextToken": {
            "target":
 "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this field isn't
```

```
empty, \n\tthere are additional elements that the service hasn't included in this request. Use this token \n\t\twith the next request to retrieve additional objects.</p>"
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for this product user.</p>",
                    "smithy.api#required": {}
                }
            },
            "Product": {

             "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>",
                    "smithy.api#required": {}
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
                    "smithy.api#required": {}
                }
            },
            "Status": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The status of a product for this user.</p>",
                    "smithy.api#required": {}
                }
            },
            "ProductUserArn": {

            "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for this product user.</p>"
                }
```

```
            },
            "StatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The status message for a product for this user.</p>"
               }
            },
            "Domain": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user information for the product subscription.</p>"
               }
            },
            "SubscriptionStartDate": {
               "target": "smithy.api#String",
               "traits": {

  "smithy.api#documentation": "<p>The start date of a subscription.</p>"
               }
            },
            "SubscriptionEndDate": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The end date of a subscription.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#documentation": "<p>A summary of the user-based subscription products for a specific user.</p>"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummaryList": {
         "type": "list",
         "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary"
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings": {
         "type": "structure",
         "members": {
            "RdsSalCredentialsProvider": {

         "target": "com.amazonaws.licensemanagerusersubscriptions#CredentialsProvider",
               "traits": {
                  "smithy.api#documentation": "<p>The <code>CredentialsProvider</code> resource contains a reference to \n\t\t\tthe credentials provider that's used for RDS license server user administration.</p>",
```

```
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Server settings that are specific to a Remote Desktop Services (RDS) license server.</p>"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProvider": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Registers an identity provider for user-based subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/identity-provider/RegisterIdentityProvider"
            },
            "smithy.api#idempotent": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderRequest": {
        "type": "structure",
        "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider to
register.</p>",
              "smithy.api#required": {}
            }
          },

       "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}
            }
          },
          "Settings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Settings",
            "traits": {
              "smithy.api#documentation": "<p>The registered identity providers product related configuration
\n\t\t\tsettings such as the subnets to provision VPC endpoints.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
             "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the identity provider's registration.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#RegisterIdentityProviderResponse": {
        "type": "structure",
        "members": {
          "IdentityProviderSummary": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
            "traits": {
```

```
                "smithy.api#documentation": "<p>Metadata that describes the results of an identity provider operation.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ResourceArn": {
          "type": "string",
          "traits": {
            "smithy.api#pattern": "^arn:([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,63}):([a-z0-9-\\.]{1,510})/([a-z0-9-\\.]{1,510})$"
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException": {
          "type": "structure",
          "members": {
            "message": {
              "target": "smithy.api#String"
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>The resource couldn't be found.</p>",
            "smithy.api#error": "client",
            "smithy.api#httpError": 404
          }
        },
        "com.amazonaws.licensemanagerusersubscriptions#SecretsManagerCredentialsProvider": {
          "type": "structure",
          "members": {
            "SecretId": {
              "target": "smithy.api#String",

          "traits": {
                "smithy.api#documentation": "<p>The ID of the Secrets Manager secret that contains credentials.</p>",
                "smithy.api#length": {
                  "min": 1
                }
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Contains a credentials secret that's stored in Secrets Manager.</p>"
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup": {
        "type": "string",
        "traits": {
          "smithy.api#length": {
            "min": 5,
            "max": 200
          },
          "smithy.api#pattern": "^sg-(([0-9a-z]{8})|([0-9a-z]{17}))$"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerEndpoint": {
        "type": "structure",
        "members": {
          "Endpoint": {

       "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The network address of the endpoint.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A network endpoint through which you can access one or more
servers.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerSettings": {
        "type": "union",
        "members": {
          "RdsSalSettings": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#RdsSalSettings",
            "traits": {
              "smithy.api#documentation": "<p>The <code>RdsSalSettings</code> resource contains settings to
configure \n\t\t\ta specific Remote Desktop Services (RDS) license server.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "<p>Contains settings for a specific server.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServerType": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
```

```
            {
              "name": "RDS_SAL",
              "value": "RDS_SAL",
              "documentation": ""
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request failed because a service quota is exceeded.</p>",
          "smithy.api#error": "client"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Settings": {

    "type": "structure",
        "members": {
          "Subnets": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
            "traits": {
              "smithy.api#documentation": "<p>The subnets defined for the registered identity provider.</p>",
              "smithy.api#length": {
                "min": 1
              },
              "smithy.api#required": {}
            }
          },
          "SecurityGroupId": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
            "traits": {
              "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoint for activation servers.</p>",
              "smithy.api#required": {}
            }
          }
        },

        "traits": {
          "smithy.api#documentation": "<p>The registered identity providers product related configuration settings
such as the\n\t\t\tsubnets to provision VPC endpoints, and the security group ID that is associated with the
VPC\n\t\t\tendpoints. The security group should permit inbound TCP port 1688 communication from
```

```
resources\n\t\t\tin the VPC.</p>"
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscription": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
          },
          {

           "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Starts a product subscription for a user with the specified identity
provider.</p>\n        <note>\n
  <p>Your estimated bill for charges on the number of users and related costs will take 48\n\t\t\thours to appear for
billing periods that haven't closed (marked as <b>Pending</b> billing status) in Amazon Web Services Billing. For
more information, see <a
href=\"https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/invoice.html\">Viewing your\n\t\t\t\tmonthly
charges</a> in the <i>Amazon Web Services Billing User Guide</i>.</p>\n        </note>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/user/StartProductSubscription"
          }
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionRequest": {
        "type": "structure",
        "members": {
          "Username": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The user name
 from the identity provider of the user.</p>",
              "smithy.api#required": {}
            }
          },
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
            "traits": {
              "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>",
              "smithy.api#required": {}
            }
          },
          "Product": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n        </p>",
              "smithy.api#required": {}

           }
          },
          "Domain": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user
for whom to start the product \n\t\t\tsubscription.</p>"
            }
          },
          "Tags": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags that apply to the product subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#StartProductSubscriptionResponse": {
      "type": "structure",
      "members": {
        "ProductUserSummary": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
           "traits": {
             "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
             "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscription": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"
        },
        {

    "target": "com.amazonaws.licensemanagerusersubscriptions#ConflictException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ServiceQuotaExceededException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
        }
```

```
        ],
        "traits": {
            "smithy.api#documentation": "<p>Stops a product subscription for a user with the specified identity provider.</p>",
            "smithy.api#http":
 {
                "code": 200,
                "method": "POST",
                "uri": "/user/StopProductSubscription"
            }
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionRequest": {
        "type": "structure",
        "members": {
            "Username": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The user name from the identity provider for the user.</p>"
                }
            },
            "IdentityProvider": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider",
                "traits": {
                    "smithy.api#documentation": "<p>An object that specifies details for the identity provider.</p>"
                }
            },
            "Product": {
                "target": "smithy.api#String",
                 "traits": {
                    "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> | <code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> | \n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
                }
            },
            "ProductUserArn": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the product user.</p>"
                }
            },
            "Domain": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The domain name of the  Active Directory that contains the user for whom to stop the product \n\t\t\tsubscription.</p>"
                }
```

```
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StopProductSubscriptionResponse": {
        "type": "structure",
        "members": {
            "ProductUserSummary": {
                "target": "com.amazonaws.licensemanagerusersubscriptions#ProductUserSummary",
                "traits": {
                    "smithy.api#documentation": "<p>Metadata that describes the start product subscription
operation.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#output": {}
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#StringList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnet":
{
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^subnet-[a-z0-9]{8,17}"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#Subnets": {
        "type": "list",
        "member": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#Subnet"
        }
    },
    "com.amazonaws.licensemanagerusersubscriptions#TagKeyList": {
        "type": "list",
        "member": {
            "target": "smithy.api#String"
        },
        "traits": {
            "smithy.api#length": {
```

```
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Adds tags to a resource.</p>",
          "smithy.api#http": {
            "method": "PUT",
            "uri": "/tags/{ResourceArn}"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceRequest": {

       "type": "structure",
        "members": {
          "ResourceArn": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to tag.</p>",
              "smithy.api#httpLabel": {},
              "smithy.api#required": {}
            }
          },
          "Tags": {
```

```
            "target": "com.amazonaws.licensemanagerusersubscriptions#Tags",
            "traits": {
              "smithy.api#documentation": "<p>The tags to apply to the specified resource.</p>",
              "smithy.api#required": {}
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#TagResourceResponse":
{
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#Tags": {
        "type": "map",
        "key": {
          "target": "smithy.api#String"
        },
        "value": {
          "target": "smithy.api#String"
        },
        "traits": {
          "smithy.api#length": {
            "min": 0,
            "max": 50
          },
          "smithy.api#sensitive": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>The request was denied because of request throttling. Retry
the request.</p>",
          "smithy.api#error": "client"
        }
      },
```

```
    "com.amazonaws.licensemanagerusersubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Removes tags from a resource.</p>",
        "smithy.api#http": {
          "method": "DELETE",
          "uri": "/tags/{ResourceArn}"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#UntagResourceRequest": {
      "type": "structure",
      "members": {
        "ResourceArn": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#ResourceArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource that you want
to remove tags from.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}
          }
        },
        "TagKeys": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#TagKeyList",
          "traits": {
            "smithy.api#documentation": "<p>The tag keys to remove from the resource.</p>",
            "smithy.api#httpQuery": "tagKeys",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UntagResourceResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettings": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#AccessDeniedException"

      },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerusersubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation": "<p>Updates additional product configuration settings for the registered
identity\n\t\t\tprovider.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/identity-provider/UpdateIdentityProviderSettings"
          },
          "smithy.api#idempotent": {}
        }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsRequest": {
        "type": "structure",
         "members": {
          "IdentityProvider": {
            "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProvider"
```

```
            },
            "Product": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The name of the user-based subscription product.</p>\n
<p>Valid values: <code>VISUAL_STUDIO_ENTERPRISE</code> |
<code>VISUAL_STUDIO_PROFESSIONAL</code> | <code>OFFICE_PROFESSIONAL_PLUS</code> |
\n<code>REMOTE_DESKTOP_SERVICES</code>\n         </p>"
               }
            },
            "IdentityProviderArn": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#Arn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the identity provider to
update.</p>"
               }
            },
            "UpdateSettings":
 {
               "target": "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings",
               "traits": {
                  "smithy.api#documentation": "<p>Updates the registered identity providers product related
configuration settings. You can\n\t\t\tupdate any combination of settings in a single operation such as the:</p>\n
<ul>\n            <li>\n               <p>Subnets which you want to add to provision VPC endpoints.</p>\n            </li>\n
      <li>\n               <p>Subnets which you want to remove the VPC endpoints from.</p>\n            </li>\n
<li>\n               <p>Security group ID which permits traffic to the VPC endpoints.</p>\n            </li>\n         </ul>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerusersubscriptions#UpdateIdentityProviderSettingsResponse":
 {
         "type": "structure",
         "members": {
            "IdentityProviderSummary": {
               "target": "com.amazonaws.licensemanagerusersubscriptions#IdentityProviderSummary",
               "traits": {
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
```

```
    },
    "com.amazonaws.licensemanagerusersubscriptions#UpdateSettings": {
      "type": "structure",
      "members": {
        "AddSubnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The ID of one or more subnets in which License Manager will
create a VPC endpoint for products that\n\t\t\trequire connectivity to activation servers.</p>",
            "smithy.api#required":
{}
          }
        },
        "RemoveSubnets": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#Subnets",
          "traits": {
            "smithy.api#documentation": "<p>The ID of one or more subnets to remove.</p>",
            "smithy.api#required": {}
          }
        },
        "SecurityGroupId": {
          "target": "com.amazonaws.licensemanagerusersubscriptions#SecurityGroup",
          "traits": {
            "smithy.api#documentation": "<p>A security group ID that allows inbound TCP port 1688
communication between resources in\n\t\t\tyour VPC and the VPC endpoints for activation servers.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>Updates the registered identity providers product related configuration
settings such
 as\n\t\t\tthe subnets to provision VPC endpoints.</p>"
      }
    },
    "com.amazonaws.licensemanagerusersubscriptions#ValidationException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A parameter is not valid.</p>",
        "smithy.api#error": "client"
      }
    }
  }
}
```

```
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists received licenses.
func (c *Client) ListReceivedLicenses(ctx context.Context, params *ListReceivedLicensesInput, optFns
...func(*Options)) (*ListReceivedLicensesOutput, error) {
 if params == nil {
  params = &ListReceivedLicensesInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "ListReceivedLicenses", params, optFns,
c.addOperationListReceivedLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListReceivedLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListReceivedLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - ProductSKU
 //
 //   - Status
 //
 //
   - Fingerprint
 //
 //   - IssuerName
 //
 //   - Beneficiary
 Filters []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
```

```
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListReceivedLicensesOutput struct {

 // Received license details.
 Licenses []types.GrantedLicense

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationListReceivedLicensesMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListReceivedLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListReceivedLicenses{},
 middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "ListReceivedLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
```

```
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err =
addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
 return err
}
if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListReceivedLicenses(options.Region),
```

```
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return
 err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
```

```
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if
 err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListReceivedLicenses(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListReceivedLicenses",
 }
}
DeleteLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
```

```
 spanBuildRequestEnd
Finalize stack step
 spanRetryLoop
 InterceptBeforeRetryLoop
 Retry
 InterceptAttempt
 RetryMetricsHeader
 ResolveAuthScheme
 GetIdentity
 ResolveEndpointV2
 disableHTTPS
 ComputePayloadHash
 setLegacyContextSigningOptions
 InterceptBeforeSigning
 Signing
 InterceptAfterSigning
Deserialize stack step
 AddRawResponseToMetadata
 ErrorCloseResponseBody
 CloseResponseBody
 ResponseErrorWrapper
 RequestIDRetriever
 InterceptAfterDeserialization
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Lists the licenses for your account.
func (c *Client) ListLicenses(ctx context.Context, params *ListLicensesInput, optFns ...func(*Options))
(*ListLicensesOutput, error) {
 if params == nil {
  params = &ListLicensesInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "ListLicenses", params, optFns,
c.addOperationListLicensesMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*ListLicensesOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type ListLicensesInput struct {

 // Filters to scope the results. The following filters are supported:
 //
 //   - Beneficiary
 //
 //   - ProductSKU
 //
 //   - Fingerprint
 //
 //   - Status
 Filters
 []types.Filter

 // Amazon Resource Names (ARNs) of the licenses.
 LicenseArns []string

 // Maximum number of results to return in a single call.
 MaxResults *int32

 // Token for the next set of results.
 NextToken *string

 noSmithyDocumentSerde
}

type ListLicensesOutput struct {

 // License details.
 Licenses []types.License

 // Token for the next set of results.
 NextToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata
```

```
 noSmithyDocumentSerde
}

func (c *Client) addOperationListLicensesMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpListLicenses{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack,
 options, "ListLicenses"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
```

```
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opListLicenses(options.Region), middleware.Before);
 err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack,
 options); err != nil {
  return err
 }
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opListLicenses(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "ListLicenses",
```

```
 }
}
DisassociateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
  InterceptBeforeSerialization
  OperationSerializer
  InterceptAfterSerialization
 Build stack step
  ClientRequestID
  ComputeContentLength
  SetCredentialSourceMiddleware
  UserAgent
  AddTimeOffsetMiddleware
  RecursionDetection
  spanBuildRequestEnd
 Finalize stack step
  spanRetryLoop
  InterceptBeforeRetryLoop
  Retry
  InterceptAttempt
  RetryMetricsHeader
  ResolveAuthScheme
  GetIdentity
  ResolveEndpointV2
  disableHTTPS
  ComputePayloadHash
  setLegacyContextSigningOptions
  InterceptBeforeSigning
  Signing
  InterceptAfterSigning
 Deserialize stack step
  AddRawResponseToMetadata
  ErrorCloseResponseBody
  CloseResponseBody
  ResponseErrorWrapper
  RequestIDRetriever
  InterceptAfterDeserialization
```

```
 OperationDeserializer
 InterceptBeforeDeserialization
 AddTimeOffsetMiddleware
 RecordResponseTiming
 RequestResponseLogger
 InterceptTransmit
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Removes the Grafana Enterprise license from a workspace.
func (c *Client) DisassociateLicense(ctx context.Context, params *DisassociateLicenseInput, optFns
...func(*Options)) (*DisassociateLicenseOutput, error) {
 if params == nil {
  params = &DisassociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DisassociateLicense", params, optFns,
c.addOperationDisassociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DisassociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DisassociateLicenseInput struct {

 // The type of license to remove from the workspace.
 //
 // This member is required.
 LicenseType types.LicenseType

 //
 The ID of the workspace to remove the Grafana Enterprise license from.
 //
 // This member is required.
```

```
 WorkspaceId *string

 noSmithyDocumentSerde
}

type DisassociateLicenseOutput struct {

 // A structure containing information about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDisassociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpDisassociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "DisassociateLicense");
 err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
```

```
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if
 err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpDisassociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDisassociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
```

```
 return err
}
if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
}
if err = addResponseErrorMiddleware(stack); err != nil {
 return err
}
if err = addRequestResponseLogging(stack, options); err != nil {
 return err
}
if err = addDisableHTTPSMiddleware(stack, options);
err != nil {
 return err
}
if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
}
if err = addInterceptAttempt(stack, options); err != nil {
 return err
}
if err = addInterceptExecution(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
}
if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
}
if err = addInterceptTransmit(stack, options); err != nil {
 return err
}
if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
}
if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
}
if err = addSpanInitializeStart(stack); err != nil {
 return err
}
```

```
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if
 err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDisassociateLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DisassociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Gets detailed information about the specified license.
func (c *Client) GetLicense(ctx context.Context, params *GetLicenseInput, optFns ...func(*Options))
(*GetLicenseOutput, error) {
 if params == nil {
  params = &GetLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "GetLicense", params, optFns,
c.addOperationGetLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*GetLicenseOutput)
```

```
 out.ResultMetadata = metadata
 return out, nil
}

type GetLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // License version.
 Version *string

 noSmithyDocumentSerde
}

type
 GetLicenseOutput struct {

 // License details.
 License *types.License

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationGetLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpGetLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "GetLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
```

```
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err
!= nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options);
err != nil {
 return err
}
if err = addCredentialSource(stack, options); err != nil {
```

```
 return err
 }
 if err = addOpGetLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opGetLicense(options.Region), middleware.Before);
err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack,
options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
```

```
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opGetLicense(region string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:
       region,
  ServiceID:     ServiceID,
  OperationName: "GetLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license.
//
// If the account that created the license is the same that is performing the
// check out, you must specify the account as the beneficiary.
func (c *Client) CheckoutLicense(ctx context.Context, params *CheckoutLicenseInput, optFns ...func(*Options))
```

```
(*CheckoutLicenseOutput, error) {
 if params == nil {
  params = &CheckoutLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutLicense", params, optFns,
c.addOperationCheckoutLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutLicenseInput struct {

 //
 Checkout type.
 //
 // This member is required.
 CheckoutType types.CheckoutType

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 // the request.
 //
 // This member is required.
 ClientToken *string

 // License entitlements.
 //
 // This member is required.
 Entitlements []types.EntitlementData

 // Key fingerprint identifying the license.
 //
 // This member is required.
 KeyFingerprint *string

 // Product SKU.
 //
 // This member is required.
 ProductSKU *string

 // License beneficiary.
 Beneficiary *string
```

```
 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutLicenseOutput struct {

 // Checkout type.
 CheckoutType types.CheckoutType

 // Allowed license entitlements.
 EntitlementsAllowed []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the checkout license.
 LicenseArn
 *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckoutLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutLicense{}, middleware.After)
```

```
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = addTimeOffsetBuild(stack,
 c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpCheckoutLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
 return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
 return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
 return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
 return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
 return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
 return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "CheckoutLicense",
 }
}
AWS SDK for Go
Copyright 2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
Copyright 2014-2015 Stripe, Inc.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
```

```
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks out the specified license for offline use.
func (c *Client) CheckoutBorrowLicense(ctx context.Context, params *CheckoutBorrowLicenseInput, optFns
...func(*Options)) (*CheckoutBorrowLicenseOutput, error) {
 if params == nil {
  params = &CheckoutBorrowLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "CheckoutBorrowLicense", params, optFns,
c.addOperationCheckoutBorrowLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckoutBorrowLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckoutBorrowLicenseInput struct {

 // Unique, case-sensitive identifier that you provide to ensure the idempotency of
 //
 the request.
 //
 // This member is required.
 ClientToken *string

 // Digital signature method. The possible value is JSON Web Signature (JWS)
 // algorithm PS384. For more information, see [RFC 7518 Digital Signature with RSASSA-PSS].
 //
 // [RFC 7518 Digital Signature with RSASSA-PSS]: https://tools.ietf.org/html/rfc7518#section-3.5
 //
 // This member is required.
 DigitalSignatureMethod types.DigitalSignatureMethod

 // License entitlements. Partial checkouts are not supported.
 //
 // This member is required.
 Entitlements []types.EntitlementData
```

```
 // Amazon Resource Name (ARN) of the license. The license must use the borrow
 // consumption configuration.
 //
 // This member is required.
 LicenseArn *string

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Node ID.
 NodeId *string

 noSmithyDocumentSerde
}

type CheckoutBorrowLicenseOutput struct {

 // Information about constraints.
 CheckoutMetadata []types.Metadata

 // Allowed license entitlements.
 EntitlementsAllowed
 []types.EntitlementData

 // Date and time at which the license checkout expires.
 Expiration *string

 // Date and time at which the license checkout is issued.
 IssuedAt *string

 // Amazon Resource Name (ARN) of the license.
 LicenseArn *string

 // License consumption token.
 LicenseConsumptionToken *string

 // Node ID.
 NodeId *string

 // Signed token.
 SignedToken *string

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}
```

```
func (c *Client) addOperationCheckoutBorrowLicenseMiddlewares(stack *middleware.Stack, options Options) (err
error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckoutBorrowLicense{}, middleware.After)
 if err != nil {
  return
 err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckoutBorrowLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
  return err
 }
 if err = addSetLoggerMiddleware(stack, options); err != nil {
  return err
 }
 if err = addClientRequestID(stack); err != nil {
  return err
 }
 if err = addComputeContentLength(stack); err != nil {
  return err
 }
 if err = addResolveEndpointMiddleware(stack, options); err != nil {
  return err
 }
 if err = addComputePayloadSHA256(stack); err != nil {
  return err
 }
 if err = addRetry(stack, options); err != nil {
  return err
 }
 if err = addRawResponseToMetadata(stack); err != nil {
  return err
 }
 if err = addRecordResponseTiming(stack); err != nil {
  return err
 }
 if err = addSpanRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addClientUserAgent(stack, options); err != nil {
  return err
 }
 if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack);
 err != nil {
  return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
  return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
  return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
  return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
  return err
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckoutBorrowLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckoutBorrowLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options);
 err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return
 err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckoutBorrowLicense(region string)
*awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:    ServiceID,
```

```
  OperationName: "CheckoutBorrowLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package grafana

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/grafana/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Assigns a Grafana Enterprise license to a workspace. To upgrade, you must use
// ENTERPRISE for the licenseType , and pass in a valid Grafana Labs token for the
// grafanaToken . Upgrading to Grafana Enterprise incurs additional fees. For more
// information, see [Upgrade a workspace to Grafana Enterprise].
//
// [Upgrade a workspace to Grafana Enterprise]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html
func (c *Client) AssociateLicense(ctx context.Context, params *AssociateLicenseInput, optFns ...func(*Options))
(*AssociateLicenseOutput, error) {
 if params == nil {
  params = &AssociateLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx,
 "AssociateLicense", params, optFns, c.addOperationAssociateLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*AssociateLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type AssociateLicenseInput struct {

 // The type of license to associate with the workspace.
 //
 // Amazon Managed Grafana workspaces no longer support Grafana Enterprise free
 // trials.
 //
 // This member is required.
```

```
 LicenseType types.LicenseType

 // The ID of the workspace to associate the license with.
 //
 // This member is required.
 WorkspaceId *string

 // A token from Grafana Labs that ties your Amazon Web Services account with a
 // Grafana Labs account. For more information, see [Link your account with Grafana Labs].
 //
 // [Link your account with Grafana Labs]: https://docs.aws.amazon.com/grafana/latest/userguide/upgrade-to-
Grafana-Enterprise.html#AMG-workspace-register-enterprise
 GrafanaToken *string

 noSmithyDocumentSerde
}

type AssociateLicenseOutput
 struct {

 // A structure containing data about the workspace.
 //
 // This member is required.
 Workspace *types.WorkspaceDescription

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationAssociateLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsRestjson1_serializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsRestjson1_deserializeOpAssociateLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "AssociateLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }

 if err = addlegacyEndpointContextSetter(stack, options); err != nil {
```

```
 return err
}
if err = addSetLoggerMiddleware(stack,
options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack,
c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
```

```
 }
 if err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpAssociateLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opAssociateLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack,
 options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
```

```
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opAssociateLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "AssociateLicense",
 }
}
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/aws-sdk-go-v2/service/licensemanager/types"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Deletes the specified license.
func (c *Client) DeleteLicense(ctx context.Context, params *DeleteLicenseInput, optFns ...func(*Options))
(*DeleteLicenseOutput, error) {
```

```
 if params == nil {
  params = &DeleteLicenseInput{}
 }

 result, metadata, err := c.invokeOperation(ctx, "DeleteLicense", params, optFns,
c.addOperationDeleteLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*DeleteLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type DeleteLicenseInput struct {

 // Amazon Resource Name (ARN) of the license.
 //
 // This member is required.
 LicenseArn *string

 // Current version of the license.
 //
 // This member is required.
 SourceVersion
 *string

 noSmithyDocumentSerde
}

type DeleteLicenseOutput struct {

 // Date when the license is deleted.
 DeletionDate *string

 // License status.
 Status types.LicenseDeletionStatus

 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationDeleteLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
```

```
}
err = stack.Serialize.Add(&awsAwsjson11_serializeOpDeleteLicense{}, middleware.After)
if err != nil {
 return err
}
err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpDeleteLicense{}, middleware.After)
if err != nil {
 return err
}
if err := addProtocolFinalizerMiddlewares(stack, options, "DeleteLicense"); err != nil {
 return fmt.Errorf("add protocol finalizers: %v", err)
}

if err = addlegacyEndpointContextSetter(stack, options); err !=
nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
```

```
 return err
 }
 if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
 }
 if err = addSetLegacyContextSigningOptionsMiddleware(stack); err
 != nil {
 return err
 }
 if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
 }
 if err = addUserAgentRetryMode(stack, options); err != nil {
 return err
 }
 if err = addCredentialSource(stack, options); err != nil {
 return err
 }
 if err = addOpDeleteLicenseValidationMiddleware(stack); err != nil {
 return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opDeleteLicense(options.Region),
middleware.Before); err != nil {
 return err
 }
 if err = addRecursionDetection(stack); err != nil {
 return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
 return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
 return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
 return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
 return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
 return err
 }
 if err = addInterceptAttempt(stack, options); err !=
 nil {
 return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opDeleteLicense(region
 string) *awsmiddleware.RegisterServiceMetadata {
 return &awsmiddleware.RegisterServiceMetadata{
  Region:        region,
  ServiceID:     ServiceID,
  OperationName: "DeleteLicense",
 }
}
CheckInLicense
 Initialize stack step
```

spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming

```
  RequestResponseLogger
  InterceptTransmit
Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
// Code generated by smithy-go-codegen DO NOT EDIT.

package licensemanager

import (
 "context"
 "fmt"
 awsmiddleware "github.com/aws/aws-sdk-go-v2/aws/middleware"
 "github.com/aws/smithy-go/middleware"
 smithyhttp "github.com/aws/smithy-go/transport/http"
)

// Checks in the specified license. Check in a license when it is no longer in use.
func (c *Client) CheckInLicense(ctx context.Context, params *CheckInLicenseInput, optFns ...func(*Options))
(*CheckInLicenseOutput, error) {
 if params == nil {
  params = &CheckInLicenseInput{}
 }
```

```
 result, metadata, err := c.invokeOperation(ctx, "CheckInLicense", params, optFns,
c.addOperationCheckInLicenseMiddlewares)
 if err != nil {
  return nil, err
 }

 out := result.(*CheckInLicenseOutput)
 out.ResultMetadata = metadata
 return out, nil
}

type CheckInLicenseInput struct {

 // License consumption token.
 //
 // This member is required.
 LicenseConsumptionToken *string

 // License beneficiary.
 Beneficiary *string

 noSmithyDocumentSerde
}

type
 CheckInLicenseOutput struct {
 // Metadata pertaining to the operation's result.
 ResultMetadata middleware.Metadata

 noSmithyDocumentSerde
}

func (c *Client) addOperationCheckInLicenseMiddlewares(stack *middleware.Stack, options Options) (err error) {
 if err := stack.Serialize.Add(&setOperationInputMiddleware{}, middleware.After); err != nil {
  return err
 }
 err = stack.Serialize.Add(&awsAwsjson11_serializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 err = stack.Deserialize.Add(&awsAwsjson11_deserializeOpCheckInLicense{}, middleware.After)
 if err != nil {
  return err
 }
 if err := addProtocolFinalizerMiddlewares(stack, options, "CheckInLicense"); err != nil {
  return fmt.Errorf("add protocol finalizers: %v", err)
 }
```

```
if err = addlegacyEndpointContextSetter(stack, options); err != nil {
 return err
}
if err = addSetLoggerMiddleware(stack, options); err != nil {
 return err
}
if err = addClientRequestID(stack); err != nil {
 return err
}
if
err = addComputeContentLength(stack); err != nil {
 return err
}
if err = addResolveEndpointMiddleware(stack, options); err != nil {
 return err
}
if err = addComputePayloadSHA256(stack); err != nil {
 return err
}
if err = addRetry(stack, options); err != nil {
 return err
}
if err = addRawResponseToMetadata(stack); err != nil {
 return err
}
if err = addRecordResponseTiming(stack); err != nil {
 return err
}
if err = addSpanRetryLoop(stack, options); err != nil {
 return err
}
if err = addClientUserAgent(stack, options); err != nil {
 return err
}
if err = smithyhttp.AddErrorCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = smithyhttp.AddCloseResponseBodyMiddleware(stack); err != nil {
 return err
}
if err = addSetLegacyContextSigningOptionsMiddleware(stack); err != nil {
 return err
}
if err = addTimeOffsetBuild(stack, c); err != nil {
 return err
}
if err = addUserAgentRetryMode(stack, options); err != nil {
```

```
 return err
 }
 if
 err = addCredentialSource(stack, options); err != nil {
  return err
 }
 if err = addOpCheckInLicenseValidationMiddleware(stack); err != nil {
  return err
 }
 if err = stack.Initialize.Add(newServiceMetadataMiddleware_opCheckInLicense(options.Region),
middleware.Before); err != nil {
  return err
 }
 if err = addRecursionDetection(stack); err != nil {
  return err
 }
 if err = addRequestIDRetrieverMiddleware(stack); err != nil {
  return err
 }
 if err = addResponseErrorMiddleware(stack); err != nil {
  return err
 }
 if err = addRequestResponseLogging(stack, options); err != nil {
  return err
 }
 if err = addDisableHTTPSMiddleware(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeRetryLoop(stack, options); err != nil {
  return err
 }
 if err = addInterceptAttempt(stack, options); err != nil {
  return err
 }
 if err = addInterceptExecution(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSerialization(stack, options); err !=
nil {
  return err
 }
 if err = addInterceptAfterSerialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeSigning(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterSigning(stack, options); err != nil {
```

```
 return err
 }
 if err = addInterceptTransmit(stack, options); err != nil {
  return err
 }
 if err = addInterceptBeforeDeserialization(stack, options); err != nil {
  return err
 }
 if err = addInterceptAfterDeserialization(stack, options); err != nil {
  return err
 }
 if err = addSpanInitializeStart(stack); err != nil {
  return err
 }
 if err = addSpanInitializeEnd(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestStart(stack); err != nil {
  return err
 }
 if err = addSpanBuildRequestEnd(stack); err != nil {
  return err
 }
 return nil
}

func newServiceMetadataMiddleware_opCheckInLicense(region string) *awsmiddleware.RegisterServiceMetadata
{
 return &awsmiddleware.RegisterServiceMetadata{
  Region:       region,
  ServiceID:
     ServiceID,
  OperationName: "CheckInLicense",
 }
}
CreateLicense
 Initialize stack step
  spanInitializeStart
  InterceptExecution
  RegisterServiceMetadata
  legacyEndpointContextSetter
  SetLogger
  OperationInputValidation
  spanInitializeEnd
 Serialize stack step
  spanBuildRequestStart
  setOperationInput
  ResolveEndpoint
```

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

```
{
  "smithy": "2.0",
  "shapes": {
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger": {
      "type": "integer"
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong": {
      "type": "long"
    },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        },

    {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove a third-party subscription provider from the Bring Your Own License (BYOL) subscriptions \n\t\t\tregistered to your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/DeregisterSubscriptionProvider"
        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderRequest": {
      "type": "structure",
      "members": {
        "SubscriptionProviderArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
           "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the subscription provider resource to deregister.</p>",
            "smithy.api#required": {}
          }
        }
      },
      "traits": {
        "smithy.api#input": {}
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {},
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#Filter": {
        "type": "structure",
        "members": {
          "Name": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The type of name to filter by.</p>"
             }
          },
          "Values": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>One or more values for the name to filter by.</p>"
            }
          },
          "Operator": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Operator",
            "traits": {
              "smithy.api#documentation": "<p>An operator for filtering results.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>A filter object that is used to return more specific results from a describe
operation.\n      Filters can be used to match a set of resources by specific criteria.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Filter"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest"
        },
```

```
        "output": {
            "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
             },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Get details for a Bring Your Own License (BYOL) subscription that's
registered to your account.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/GetRegisteredSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
                "traits": {
                    "smithy.api#documentation":
 "<p>The Amazon Resource Name (ARN) of the BYOL registration resource to get details for.</p>",
                    "smithy.api#required": {}
                }
            }
        },
        "traits": {
            "smithy.api#input": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
```

```
            "SubscriptionProviderArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) for the BYOL registration
resource specified in the request.</p>"
               }
            },
            "SubscriptionProviderSource": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",

         "traits": {
                  "smithy.api#documentation": "<p>The subscription provider for the BYOL registration resource
specified \n\t\t\tin the request.</p>"
               }
            },
            "SecretArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the third-party access
secret stored in Secrets Manager for the BYOL \n\t\t\tregistration resource specified in the request.</p>"
               }
            },
            "SubscriptionProviderStatus": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
               "traits": {
                  "smithy.api#documentation": "<p>The status of the Linux subscription provider access token from the
last \n\t\t\tsuccessful subscription data request.</p>"
                }
            },
            "SubscriptionProviderStatusMessage": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The detailed message from your subscription provider token
status.</p>"
               }
            },
            "LastSuccessfulDataRetrievalTime": {
               "target": "smithy.api#String",
               "traits": {
                  "smithy.api#documentation": "<p>The timestamp from the last time License Manager retrieved
subscription details \n\t\t\tfrom your registered third-party Linux subscription provider.</p>"
               }
            }
         },
         "traits": {
            "smithy.api#output": {}
         }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings": {
      "type": "operation",
      "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Lists the Linux subscriptions service settings for your account.</p>",
        "smithy.api#http": {
          "code": 200,
          "method": "POST",
          "uri": "/subscription/GetServiceSettings"

        },
        "smithy.api#idempotent": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsRequest": {
      "type": "structure",
      "members": {}
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettingsResponse": {
      "type": "structure",
      "members": {
        "LinuxSubscriptionsDiscovery": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
          "traits": {
            "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
          }
        },
        "LinuxSubscriptionsDiscoverySettings": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
          "traits": {
            "smithy.api#documentation": "<p>Lists
```

```
 the settings defined for Linux subscriptions discovery. The settings include if\n      Organizations integration has been enabled, and which Regions data will be aggregated from.</p>"
                }
            },
            "Status": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
                "traits": {
                    "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
                }
            },
            "StatusMessage": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
                "traits": {
                    "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
                }
            },
            "HomeRegions": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
                 "traits": {
                    "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
                }
            }
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Instance": {
        "type": "structure",
        "members": {
            "AmiId": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The AMI ID used to launch the instance.</p>"
                }
            },
            "InstanceID": {
                "target": "smithy.api#String",
                "traits": {
                    "smithy.api#documentation": "<p>The instance ID of the resource.</p>"
                }
            },
            "InstanceType": {
                "target": "smithy.api#String",
                "traits":
{
                    "smithy.api#documentation": "<p>The instance type of the resource.</p>"
                }
```

```
        },
        "AccountID": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The account ID which owns the instance.</p>"
          }
        },
        "Status": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The status of the instance.</p>"
          }
        },
        "Region": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The Region the instance is running in.</p>"
          }
        },
        "UsageOperation": {
          "target": "smithy.api#String",

   "traits": {
            "smithy.api#documentation": "<p>The usage operation of the instance. For more information, see For more information, see\n        <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i>.</p>"
          }
        },
        "ProductCode": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList",
          "traits": {
            "smithy.api#documentation": "<p>The product code for the instance. For more information, see <a href=\"https://docs.aws.amazon.com/license-manager/latest/userguide/linux-subscriptions-usage-operation.html\">Usage\n        operation values</a> in the <i>License Manager User Guide</i> .</p>"
          }
        },
        "LastUpdatedTime": {
          "target": "smithy.api#String",
           "traits": {
            "smithy.api#documentation": "<p>The time in which the last discovery updated the instance details.</p>"
          }
        },
        "SubscriptionName": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the license subscription that the instance uses.</p>"
```

```
            }
          },
          "OsVersion": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The operating system software version that runs on your
instance.</p>"
            }
          },
          "SubscriptionProviderCreateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp when you registered
 the third-party Linux subscription \n\t\t\tprovider for the subscription that the instance uses.</p>"
            }
          },
          "SubscriptionProviderUpdateTime": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The timestamp from the last time that the instance synced with the
registered \n\t\t\tthird-party Linux subscription provider.</p>"
            }
          },
          "DualSubscription": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>Indicates that you have two different license subscriptions for
\n\t\t\tthe same software on your instance.</p>"
            }
          },
          "RegisteredWithSubscriptionProvider": {
            "target": "smithy.api#String",
            "traits": {

    "smithy.api#documentation": "<p>Indicates that your instance uses a BYOL license subscription from \n\t\t\ta
third-party Linux subscription provider that you've registered with License Manager.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>Details discovered information about a running instance using Linux
subscriptions.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList": {
        "type": "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Instance"
```

```
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException": {
        "type": "structure",
        "members": {
          "message": {
            "target": "smithy.api#String"
          }
        },
        "traits": {
          "smithy.api#documentation":
"<p>An exception occurred with the service.</p>",
          "smithy.api#error": "server"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#LicenseManagerLinuxSubscriptions": {
        "type": "service",
        "version": "2018-05-10",
        "operations": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#DeregisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetRegisteredSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#GetServiceSettings"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions"
           },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource"
```

```
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings"
        }
      ],
      "traits": {
        "aws.api#service": {
          "sdkId": "License Manager Linux Subscriptions",
           "arnNamespace": "license-manager-linux-subscriptions",
          "cloudTrailEventSource": "license-manager-linux-subscriptions.amazonaws.com"
        },
        "aws.auth#sigv4": {
          "name": "license-manager-linux-subscriptions"
        },
        "aws.protocols#restJson1": {},
        "smithy.api#cors": {
          "additionalAllowedHeaders": [
            "*",
            "content-type",
            "x-amz-content-sha256",
            "x-amz-user-agent",
            "x-amzn-platform-id",
            "x-amzn-trace-id"
          ],
          "additionalExposedHeaders": [
            "x-amzn-errortype",
            "x-amzn-requestid",
            "x-amzn-trace-id"
          ]
        },
        "smithy.api#documentation": "<p>With License Manager,
 you can discover and track your commercial Linux subscriptions on running\n      Amazon EC2 instances.</p>",
        "smithy.api#title": "AWS License Manager Linux Subscriptions",
        "smithy.rules#endpointRuleSet": {
          "version": "1.0",
          "parameters": {
            "Region": {
              "builtIn": "AWS::Region",
              "required": false,
              "documentation": "The AWS region used to dispatch the request.",
              "type": "String"
            },
            "UseDualStack": {
              "builtIn": "AWS::UseDualStack",
              "required": true,
              "default": false,
              "documentation": "When true, use the dual-stack endpoint. If the configured endpoint does not
 support dual-stack, dispatching the request MAY return an error.",
```

```
            "type": "Boolean"
        },
        "UseFIPS": {
          "builtIn": "AWS::UseFIPS",
          "required": true,
          "default": false,
          "documentation": "When true, send this request to the FIPS-compliant regional endpoint. If the configured endpoint does not have a FIPS compliant endpoint, dispatching the request will return an error.",
          "type": "Boolean"
        },
        "Endpoint": {
          "builtIn": "SDK::Endpoint",
          "required": false,
          "documentation": "Override the endpoint used to send this request",
          "type": "String"
        }
      },
      "rules": [
        {
          "conditions": [
            {
              "fn": "isSet",
              "argv": [
                {
                  "ref": "Endpoint"
                }
              ]
            }
          ],
          "rules": [
            {
              "conditions": [
                {
                  "fn": "booleanEquals",
                  "argv": [
                    {
                      "ref": "UseFIPS"
                    },
                    true
                  ]
                }

    ],
                "error": "Invalid Configuration: FIPS and custom endpoint are not supported",
                "type": "error"
              },
              {
                "conditions": [],
```

```
                "rules": [
                    {
                        "conditions": [
                            {
                                "fn": "booleanEquals",
                                "argv": [
                                    {
                                        "ref": "UseDualStack"
                                    },
                                    true
                                ]

}
                        ],
                        "error": "Invalid Configuration: Dualstack and custom endpoint are not supported",
                        "type": "error"
                    },
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": {
                                "ref": "Endpoint"
                            },
                            "properties": {},
                            "headers": {}
                        },
                        "type": "endpoint"
                    }
                ],
                "type": "tree"

            }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "rules": [
                {
                    "conditions": [
                        {
                            "fn": "isSet",
                            "argv": [
                                {
                                    "ref": "Region"
                                }
                            ]
                        }
```

```
                ],
                "rules": [
                  {
                    "conditions": [
                      {

            "fn": "aws.partition",
                        "argv": [
                          {
                            "ref": "Region"
                          }
                        ],
                        "assign": "PartitionResult"
                      }
                    ],
                    "rules": [
                      {
                        "conditions": [
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {

                          "ref": "UseFIPS"
                              },
                              true
                            ]
                          },
                          {
                            "fn": "booleanEquals",
                            "argv": [
                              {
                                "ref": "UseDualStack"
                              },
                              true
                            ]
                          }

    ],
                        "rules": [
                          {
                            "conditions": [
                              {
                                "fn": "booleanEquals",
                                "argv": [
                                  true,
                                  {
                                    "fn": "getAttr",
```

```
                                        "argv": [
                                            {
                                                "ref": "PartitionResult"

                    },
                                                "supportsFIPS"
                                            ]
                                        }
                                    ]
                                },
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
                                            "argv": [

                                             {
                                                    "ref": "PartitionResult"
                                                },
                                                "supportsDualStack"
                                            ]
                                        }
                                    ]
                                }
                            ],
                            "rules": [
                                {
                                    "conditions": [],

        "rules": [
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                                "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],

                    "type": "tree"
                                }
                            ],
                            "type": "tree"
```

```
                    },
                    {
                      "conditions": [],
                      "error": "FIPS and DualStack are enabled, but this partition does not support
one or both",
                      "type": "error"
                    }
                  ],
                  "type": "tree"
                },
                {

        "conditions": [
                    {
                      "fn": "booleanEquals",
                      "argv": [
                        {
                          "ref": "UseFIPS"
                        },
                        true
                      ]
                    }
                  ],
                  "rules": [
                    {
                      "conditions": [
                        {

                "fn": "booleanEquals",
                        "argv": [
                          {
                            "fn": "getAttr",
                            "argv": [
                              {
                                "ref": "PartitionResult"
                              },
                              "supportsFIPS"
                            ]
                          },
                          true

                      ]
                        }
                      ],
                      "rules": [
                        {
                          "conditions": [],
                          "rules": [
```

```
                                        {
                                            "conditions": [],
                                            "endpoint": {
                                                "url": "https://license-manager-linux-subscriptions-
fips.{Region}.{PartitionResult#dnsSuffix}",

    "properties": {},
                                                "headers": {}
                                            },
                                            "type": "endpoint"
                                        }
                                    ],
                                    "type": "tree"
                                }
                            ],
                            "type": "tree"
                        },
                        {
                            "conditions": [],
                            "error": "FIPS is enabled
but this partition does not support FIPS",
                            "type": "error"
                        }
                    ],
                    "type": "tree"
                },
                {
                    "conditions": [
                        {
                            "fn": "booleanEquals",
                            "argv": [
                                {
                                    "ref": "UseDualStack"
                                },
                                true

            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [
                                {
                                    "fn": "booleanEquals",
                                    "argv": [
                                        true,
                                        {
                                            "fn": "getAttr",
```

```
                                    "argv": [
                                        {

                                        "ref": "PartitionResult"
                                        },
                                        "supportsDualStack"
                                    ]
                                }
                            ]
                        }
                    ],
                    "rules": [
                        {
                            "conditions": [],
                            "rules": [

        {
                                    "conditions": [],
                                    "endpoint": {
                                        "url": "https://license-manager-linux-
subscriptions.{Region}.{PartitionResult#dualStackDnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"

                }
                        ],
                        "type": "tree"
                    },
                    {
                        "conditions": [],
                        "error": "DualStack is enabled but this partition does not support DualStack",
                        "type": "error"
                    }
                ],
                "type": "tree"
            },
            {
                "conditions": [],
                "rules": [
                    {
                        "conditions": [],
                        "endpoint": {
                            "url": "https://license-manager-linux-
```

```
subscriptions.{Region}.{PartitionResult#dnsSuffix}",
                                        "properties": {},
                                        "headers": {}
                                    },
                                    "type": "endpoint"
                                }
                            ],
                            "type": "tree"
                        }
                    ],
                    "type": "tree"
                }
            ],
            "type": "tree"
        },
        {
            "conditions": [],
            "error": "Invalid Configuration: Missing Region",
            "type": "error"
        }
    ],
    "type": "tree"
}
]
},
"smithy.rules#endpointTests": {
"testCases": [
{
"documentation": "For region us-east-1 with FIPS enabled and DualStack enabled",
"expect": {
"endpoint": {
"url": "https://license-manager-linux-subscriptions-fips.us-east-1.api.aws"

}
},
"params": {
"Region": "us-east-1",
"UseFIPS": true,
"UseDualStack": true
}
},
{
"documentation": "For region us-east-1 with FIPS enabled and DualStack disabled",
"expect": {
"endpoint": {
"url": "https://license-manager-linux-subscriptions-fips.us-east-1.amazonaws.com"
}
},
```

```
      "params": {
        "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {

  "documentation": "For region us-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-east-1.amazonaws.com"
        }

  },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region cn-north-1 with FIPS enabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.cn-north-
1.api.amazonwebservices.com.cn"
        }
      },
      "params": {
        "Region": "cn-north-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
```

```
                {

  "documentation": "For region cn-north-1 with FIPS enabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": true,
                      "UseDualStack": false
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.api.amazonwebservices.com.cn"
                      }
                     },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": true
                    }
                  },
                  {
                    "documentation": "For region cn-north-1 with FIPS disabled and DualStack disabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions.cn-north-1.amazonaws.com.cn"
                      }
                    },
                    "params": {
                      "Region": "cn-north-1",
                      "UseFIPS": false,
                      "UseDualStack": false
                    }
                  },
                  {

   "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack enabled",
                    "expect": {
                      "endpoint": {
                        "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.api.aws"
                      }
                    },
```

```
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": true
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS enabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions-fips.us-gov-east-1.amazonaws.com"
        }

     },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": true,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For region us-gov-east-1 with FIPS disabled and DualStack enabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.api.aws"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": true
      }
    },
    {

"documentation": "For region us-gov-east-1 with FIPS disabled and DualStack disabled",
      "expect": {
        "endpoint": {
          "url": "https://license-manager-linux-subscriptions.us-gov-east-1.amazonaws.com"
        }
      },
      "params": {
        "Region": "us-gov-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
```

```
            "documentation": "For region us-iso-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-iso-east-1.c2s.ic.gov"
              }

          },
            "params": {
              "Region": "us-iso-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-iso-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-iso-east-1.c2s.ic.gov"
              }
            },
            "params": {
              "Region": "us-iso-east-1",
              "UseFIPS": false,
              "UseDualStack": false
            }
          },
          {

 "documentation": "For region us-isob-east-1 with FIPS enabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions-fips.us-isob-east-1.sc2s.sgov.gov"
              }
            },
            "params": {
              "Region": "us-isob-east-1",
              "UseFIPS": true,
              "UseDualStack": false
            }
          },
          {
            "documentation": "For region us-isob-east-1 with FIPS disabled and DualStack disabled",
            "expect": {
              "endpoint": {
                "url": "https://license-manager-linux-subscriptions.us-isob-east-1.sc2s.sgov.gov"

}
            },
```

```
      "params": {
        "Region": "us-isob-east-1",
        "UseFIPS": false,
        "UseDualStack": false
      }
    },
    {
      "documentation": "For custom endpoint with region set and fips disabled and dualstack disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "Region": "us-east-1",
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },

  {
      "documentation": "For custom endpoint with region not set and fips disabled and dualstack
disabled",
      "expect": {
        "endpoint": {
          "url": "https://example.com"
        }
      },
      "params": {
        "UseFIPS": false,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
    {
      "documentation": "For custom endpoint with fips enabled and dualstack disabled",
      "expect": {
        "error": "Invalid Configuration: FIPS and custom endpoint are not supported"
      },
      "params": {

   "Region": "us-east-1",
        "UseFIPS": true,
        "UseDualStack": false,
        "Endpoint": "https://example.com"
      }
    },
```

```
                {
                  "documentation": "For custom endpoint with fips disabled and dualstack enabled",
                  "expect": {
                    "error": "Invalid Configuration: Dualstack and custom endpoint are not supported"
                  },
                  "params": {
                    "Region": "us-east-1",
                    "UseFIPS": false,
                    "UseDualStack": true,
                    "Endpoint": "https://example.com"
                  }
                },
                {
                  "documentation": "Missing region",

                "expect": {
                    "error": "Invalid Configuration: Missing Region"
                  }
                }
              ],
              "version": "1.0"
            }
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery": {
          "type": "string",
          "traits": {
            "smithy.api#enum": [
              {
                "name": "Enabled",
                "value": "Enabled",
                "documentation": "Enabled LinuxSubscriptionsDiscovery"
              },
              {
                "name": "Disabled",
                "value": "Disabled",
                "documentation": "Disabled LinuxSubscriptionsDiscovery"
              }
            ]
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings":
{
          "type": "structure",
          "members": {
            "SourceRegions": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
              "traits": {
```

```
                "smithy.api#documentation": "<p>The Regions in which to discover data for Linux
subscriptions.</p>",
                "smithy.api#required": {}
              }
            },
            "OrganizationIntegration": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration",
              "traits": {
                "smithy.api#documentation": "<p>Details if you have enabled resource discovery across your
accounts in Organizations.</p>",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#documentation": "<p>Lists the settings defined for discovering Linux
 subscriptions.</p>"
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstances": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest"
          },
          "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Lists
 the running Amazon EC2 instances that were discovered with commercial Linux\n      subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/ListLinuxSubscriptionInstances"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
```

```
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "Instances"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesRequest": {
        "type": "structure",
        "members": {
          "Filters": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",
            "traits": {
              "smithy.api#documentation": "<p>An array of structures
 that you can use to filter the results by your specified criteria. \n    \tFor example, you can specify
<code>Region</code> in the <code>Name</code>, with the \n    \t<code>contains</code> operator to list all
subscriptions that match a partial string in the \n    \t<code>Value</code>, such as <code>us-west</code>.</p>\n
  <p>For each filter, you can specify one of the following values for the <code>Name</code> key \n    \tto
streamline results:</p>\n        <ul>\n          <li>\n            <p>\n              <code>AccountID</code>\n
</p>\n          </li>\n          <li>\n            <p>\n              <code>AmiID</code>\n            </p>\n          </li>\n
        <li>\n            <p>\n              <code>DualSubscription</code>\n            </p>\n          </li>\n
<li>\n            <p>\n              <code>InstanceID</code>\n            </p>\n          </li>\n          <li>\n
  <p>\n              <code>InstanceType</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
    <code>ProductCode</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Region</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>Status</code>\n            </p>\n          </li>\n          <li>\n            <p>\n
<code>UsageOperation</code>\n            </p>\n          </li>\n        </ul>\n        <p>For each filter, you can use
one of the following <code>Operator</code> values to \n  \t\tdefine the behavior of the filter:</p>\n        <ul>\n
    <li>\n            <p>\n              <code>contains</code>\n            </p>\n          </li>\n          <li>\n
<p>\n              <code>equals</code>\n            </p>\n          </li>\n          <li>\n
            <p>\n              <code>Notequal</code>\n            </p>\n          </li>\n        </ul>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
              "smithy.api#length": {
                "min": 1,
                "max": 16384
              }
```

```
            }
          }
        },
        "traits": {
          "smithy.api#documentation":
 "NextToken length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionInstancesResponse": {
        "type": "structure",
        "members": {
          "Instances": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InstanceList",
            "traits": {
              "smithy.api#documentation": "<p>An array that contains instance objects.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional
 objects.</p>"
            }
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptions": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
```

```
            "smithy.api#documentation":
 "<p>Lists the Linux subscriptions that have been discovered. If you have linked your\n      organization, the
returned results will include data aggregated across your accounts in\n      Organizations.</p>",
            "smithy.api#http": {
               "code": 200,
               "method": "POST",
               "uri": "/subscription/ListLinuxSubscriptions"
            },
            "smithy.api#idempotent": {},
            "smithy.api#paginated": {
               "inputToken": "NextToken",
               "outputToken": "NextToken",
               "pageSize": "MaxResults",
               "items": "Subscriptions"
            }
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsRequest": {
         "type": "structure",
         "members": {
            "Filters": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#FilterList",

            "traits": {
                  "smithy.api#documentation": "<p>An array of structures that you can use to filter the results to those
that match one or\n      more sets of key-value pairs that you specify. For example, you can filter by the name of\n
 <code>Subscription</code> with an optional operator to see subscriptions that match,\n      partially match, or don't
match a certain subscription's name.</p>\n         <p>The valid names for this filter are:</p>\n         <ul>\n
<li>\n               <p>\n                  <code>Subscription</code>\n               </p>\n            </li>\n         </ul>\n
<p>The valid Operators for this filter are:</p>\n         <ul>\n            <li>\n               <p>\n
<code>contains</code>\n               </p>\n            </li>\n            <li>\n               <p>\n
<code>equals</code>\n               </p>\n            </li>\n            <li>\n               <p>\n
         <code>Notequal</code>\n               </p>\n            </li>\n         </ul>"
                  }
               },
               "MaxResults": {
                  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
                  "traits": {
                     "smithy.api#documentation": "<p>The maximum items to return in a request.</p>"
                  }
               },
               "NextToken": {
                  "target": "smithy.api#String",
                  "traits": {
                     "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>",
                     "smithy.api#length": {
                        "min": 1,
```

```
                    "max": 16384
                }
            }
        }
    },
    "traits": {
        "smithy.api#documentation": "NextToken
length limit is half of ddb accepted limit.\nIncrease this limit if parameters in request increases."
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListLinuxSubscriptionsResponse": {
    "type": "structure",
    "members": {
        "Subscriptions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList",
            "traits": {
                "smithy.api#documentation": "<p>An array that contains subscription objects.</p>"
            }
        },
        "NextToken": {
            "target": "smithy.api#String",
            "traits": {
                "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with the
next request to retrieve \n\tadditional objects.</p>"

            }
        }
    }
},
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProviders": {
    "type": "operation",
    "input": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest"
    },
    "output": {
        "target":
"com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse"
    },
    "errors": [
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
        },
        {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
          }
        ],
        "traits": {
          "smithy.api#documentation":
 "<p>List Bring Your Own License (BYOL) subscription registration resources for your account.</p>",
          "smithy.api#http": {
            "code": 200,
            "method": "POST",
            "uri": "/subscription/ListRegisteredSubscriptionProviders"
          },
          "smithy.api#idempotent": {},
          "smithy.api#paginated": {
            "inputToken": "NextToken",
            "outputToken": "NextToken",
            "pageSize": "MaxResults",
            "items": "RegisteredSubscriptionProviders"
          }
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersRequest": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSources": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList",

    "traits": {
              "smithy.api#documentation": "<p>To filter your results, specify which subscription providers to
return \n\t\t\tin the list.</p>"
            }
          },
          "MaxResults": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxInteger",
            "traits": {
              "smithy.api#documentation": "<p>The maximum items to return in a request.</p>",
              "smithy.api#range": {
                "min": 1,
                "max": 100
              }
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>A token to specify where to start paginating. This \n\tis the
nextToken from a previously truncated response.</p>"
            }
          }
```

```
        },

        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListRegisteredSubscriptionProvidersResponse": {
        "type": "structure",
        "members": {
          "RegisteredSubscriptionProviders": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList",
            "traits": {
              "smithy.api#documentation": "<p>The list of BYOL registration resources that fit the criteria
\n\t\t\tyou specified in the request.</p>"
            }
          },
          "NextToken": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The next token used for paginated responses. When this \n\tfield
isn't empty, there are additional elements that the service hasn't \n\tincluded in this request. Use this token with
 the next request to retrieve \n\tadditional objects.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResource": {
        "type": "operation",
        "input": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest"
        },
        "output": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse"
        },
        "errors": [
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
          },
          {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
           }
        ],
```

```
      "traits": {
        "smithy.api#documentation": "<p>List the metadata tags that are assigned to the \n\t\t\tspecified Amazon Web Services resource.</p>",
        "smithy.api#http": {
          "method": "GET",
          "uri": "/tags/{resourceArn}"
        },
        "smithy.api#readonly": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceRequest": {
      "type": "structure",
      "members": {
        "resourceArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the resource for which to list metadata tags.</p>",
            "smithy.api#httpLabel": {},
            "smithy.api#required": {}

          }
        }
      },
      "traits": {
        "smithy.api#input": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ListTagsForResourceResponse": {
      "type": "structure",
      "members": {
        "tags": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
          "traits": {
            "smithy.api#documentation": "<p>The metadata tags for the requested resource.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#output": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Operator": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "EQUAL",
```

```
            "value": "Equal",
            "documentation": "Equal operator"
          },
          {
            "name": "NOT_EQUAL",
            "value": "NotEqual",
            "documentation": "Not equal operator"
          },
          {
            "name": "CONTAINS",
            "value": "Contains",
            "documentation": "Contains operator"
          }
        ],
        "smithy.api#length": {
          "min": 1,
          "max": 20
        }
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#OrganizationIntegration": {
      "type": "string",
      "traits": {
        "smithy.api#enum": [
          {
            "name": "Enabled",
            "value": "Enabled",
            "documentation": "Enabled OrganizationIntegration"
          },
          {

"name": "Disabled",
            "value": "Disabled",
            "documentation": "Disabled OrganizationIntegration"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ProductCodeList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProvider": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest"
```

```
        },
        "output": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse"
        },
        "errors": [
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },

           {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
        ],
        "traits": {
            "smithy.api#documentation": "<p>Register the supported third-party subscription provider for your Bring Your Own License (BYOL) subscription.</p>",
            "smithy.api#http": {
                "code": 200,
                "method": "POST",
                "uri": "/subscription/RegisterSubscriptionProvider"
            },
            "smithy.api#idempotent": {}
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderRequest": {
        "type": "structure",
        "members": {
            "SubscriptionProviderSource": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
                 "traits": {
                    "smithy.api#documentation": "<p>The supported Linux subscription provider to register.</p>",
                    "smithy.api#required": {}
                }
            },
            "SecretArn": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
                "traits": {
                    "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the secret where you've stored your subscription provider's access token. For \n\t\t\tRHEL subscriptions managed through the Red Hat Subscription Manager (RHSM), the secret contains \n\t\t\tyour Red Hat Offline token.</p>",
                    "smithy.api#required": {}
                }
            },
            "Tags": {
                "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
```

```
            "traits": {

          "smithy.api#documentation": "<p>The metadata tags to assign to your registered Linux subscription
provider \n\t\t\tresource.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#input": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisterSubscriptionProviderResponse": {
        "type": "structure",
        "members": {
          "SubscriptionProviderSource": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
            "traits": {
              "smithy.api#documentation": "<p>The Linux subscription provider that you registered.</p>"
            }
          },
          "SubscriptionProviderArn": {
            "target": "smithy.api#String",
            "traits": {
              "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of
 the Linux subscription provider resource that you registered.</p>"
            }
          },
          "SubscriptionProviderStatus": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of the registration action for the Linux
subscription provider \n\t\t\tthat you requested.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#output": {}
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider": {
        "type": "structure",
        "members": {
          "SubscriptionProviderArn": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
            "traits": {
              "smithy.api#documentation": "<p>The
 Amazon Resource Name (ARN) of the Linux subscription provider resource that you registered.</p>"
            }
```

```
        },
        "SubscriptionProviderSource": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource",
          "traits": {
            "smithy.api#documentation": "<p>A supported third-party Linux subscription provider. License Manager currently supports \n\t\t\tRed Hat subscriptions.</p>"
          }
        },
        "SecretArn": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn",
          "traits": {
            "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Secrets Manager secret that stores your registered Linux subscription provider \n\t\t\taccess token. For RHEL account subscriptions, this is the offline token.</p>"
          }
        },
        "SubscriptionProviderStatus": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus",
          "traits": {
            "smithy.api#documentation": "<p>Indicates the status of your registered Linux subscription provider access token \n\t\t\tfrom the last time License Manager retrieved subscription data. For RHEL account subscriptions, \n\t\t\tthis is the status of the offline token.</p>"
          }
        },
        "SubscriptionProviderStatusMessage": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>A detailed message that's associated with your BYOL subscription \n\t\t\tprovider token status.</p>"
          }
        },
        "LastSuccessfulDataRetrievalTime": {
          "target": "smithy.api#String",
          "traits": {

            "smithy.api#documentation": "<p>The timestamp from the last time that License Manager accessed third-party subscription data \n\t\t\tfor your account from your registered Linux subscription provider.</p>"
          }
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>A third-party provider for operating system (OS) platform software and license \n\t\t\tsubscriptions, such as Red Hat. When you register a third-party Linux subscription \n\t\t\tprovider, License Manager can get subscription data from the registered provider.</p>"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProviderList": {
      "type": "list",
```

```
        "member": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#RegisteredSubscriptionProvider"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException":
{
        "type": "structure",
        "members": {
            "message": {
                "target": "smithy.api#String"
            }
        },
        "traits": {
            "smithy.api#documentation": "<p>Unable to find the requested Amazon Web Services resource.</p>",
            "smithy.api#error": "client"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#SecretArn": {
        "type": "string",
        "traits": {
            "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:secretsmanager:[a-z0-9-\\.]{0,63}:[a-z0-9-
\\.]{0,63}:secret:[^/]{1,1023}$"
        }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Status": {
        "type": "string",
        "traits": {
            "smithy.api#enum": [
                {
                    "name": "InProgress",
                    "value": "InProgress",
                    "documentation": "InProgress status"
                },
                {
                    "name": "Completed",
                    "value": "Completed",
                    "documentation": "Completed status"
                },
                {
                    "name": "Successful",
                    "value": "Successful",
                    "documentation": "Successful status"
                },
                {
                    "name": "Failed",
                    "value": "Failed",
                    "documentation": "Failed status"
                }
```

```
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringList": {
      "type": "list",
      "member": {
        "target": "smithy.api#String",
        "traits": {
          "smithy.api#length": {
            "min": 1,
            "max": 100
          }
        }
      },
      "traits": {
        "smithy.api#length": {
          "min": 1,
          "max": 100
        },
        "smithy.api#uniqueItems": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap": {
      "type": "map",
      "key": {
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription": {
      "type": "structure",
      "members": {
        "Name": {
          "target": "smithy.api#String",
          "traits": {
            "smithy.api#documentation": "<p>The name of the subscription.</p>"
          }
        },
        "Type": {
          "target": "smithy.api#String",
          "traits": {

        "smithy.api#documentation": "<p>The type of subscription. The type can be subscription-included with Amazon EC2, Bring Your Own\n      Subscription model (BYOS), or from the Amazon Web Services Marketplace. Certain subscriptions may use licensing from the\n      Amazon Web Services Marketplace as well as OS licensing from Amazon EC2 or BYOS.</p>"
```

```
            }
          },
          "InstanceCount": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#BoxLong",
            "traits": {
              "smithy.api#documentation": "<p>The total amount of running instances using this subscription.</p>"
            }
          }
        },
        "traits": {
          "smithy.api#documentation": "<p>An object which details a discovered Linux subscription.</p>"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionList": {
        "type": "list",

       "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Subscription"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn": {
        "type": "string",
        "traits": {
          "smithy.api#pattern": "^arn:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-9-\\.]{1,63}:[a-z0-
9-\\.]{1,510}/[a-z0-9-\\.]{1,510}$"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource": {
        "type": "string",
        "traits": {
          "smithy.api#enum": [
            {
              "name": "RedHat",
              "value": "RedHat",
              "documentation": "RedHat subscription provider namespace"
            }
          ]
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSourceList": {
        "type":
 "list",
        "member": {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderSource"
        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderStatus": {
        "type": "string",
```

```
      "traits": {
        "smithy.api#enum": [
          {
            "name": "ACTIVE",
            "value": "ACTIVE",
            "documentation": "ACTIVE status"
          },
          {
            "name": "INVALID",
            "value": "INVALID",
            "documentation": "INVALID status"
          },
          {
            "name": "PENDING",
            "value": "PENDING",
            "documentation": "PENDING status"
          }
        ]
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList":
{
      "type": "list",
      "member": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#TagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest"
      },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
```

```
            },
            {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
         ],
         "traits": {
            "smithy.api#documentation": "<p>Add metadata tags to the specified Amazon Web Services
resource.</p>",
            "smithy.api#http": {
               "method": "PUT",
               "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceRequest": {
         "type": "structure",
         "members": {
            "resourceArn": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
               "traits": {
                  "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to which to add the specified \n\t\t\tmetadata tags.</p>",
                   "smithy.api#httpLabel": {},
                  "smithy.api#required": {}
               }
            },
            "tags": {
               "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Tags",
               "traits": {
                  "smithy.api#documentation": "<p>The metadata tags to assign to the Amazon Web Services resource.
Tags are \n\t\t\tformatted as key value pairs.</p>",
                  "smithy.api#required": {}
               }
            }
         },
         "traits": {
            "smithy.api#input": {}
         }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#TagResourceResponse": {
         "type": "structure",
         "members": {},
         "traits": {
            "smithy.api#output": {}
         }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#Tags": {
      "type": "map",
      "key":
{
        "target": "smithy.api#String"
      },
      "value": {
        "target": "smithy.api#String"
      },
      "traits": {
        "smithy.api#length": {
          "min": 0,
          "max": 50
        },
        "smithy.api#sensitive": {}
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The request was denied due to request throttling.</p>",
        "smithy.api#error": "client"
      }
    },
    "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResource": {
      "type": "operation",
      "input": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest"
       },
      "output": {
        "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse"
      },
      "errors": [
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
        },
        {
          "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ResourceNotFoundException"
        }
      ],
      "traits": {
        "smithy.api#documentation": "<p>Remove one or more metadata tag from the specified Amazon Web
Services resource.</p>",
```

```
            "smithy.api#http": {
              "method": "DELETE",
              "uri": "/tags/{resourceArn}"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceRequest": {
          "type": "structure",

    "members": {
            "resourceArn": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#SubscriptionProviderArn",
              "traits": {
                "smithy.api#documentation": "<p>The Amazon Resource Name (ARN) of the Amazon Web Services
resource to remove the metadata tags from.</p>",
                "smithy.api#httpLabel": {},
                "smithy.api#required": {}
              }
            },
            "tagKeys": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#TagKeyList",
              "traits": {
                "smithy.api#documentation": "<p>A list of metadata tag keys to remove from the requested
\n\t\t\tresource.</p>",
                "smithy.api#httpQuery": "tagKeys",
                "smithy.api#required": {}
              }
            }
          },
          "traits": {
            "smithy.api#input":
 {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UntagResourceResponse": {
          "type": "structure",
          "members": {},
          "traits": {
            "smithy.api#output": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettings": {
          "type": "operation",
          "input": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest"
          },
          "output": {
```

```
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse"
          },
          "errors": [
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#InternalServerException"
            },
            {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ThrottlingException"
            },
            {

  "target": "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException"
            }
          ],
          "traits": {
            "smithy.api#documentation": "<p>Updates the service settings for Linux subscriptions.</p>",
            "smithy.api#http": {
              "code": 200,
              "method": "POST",
              "uri": "/subscription/UpdateServiceSettings"
            },
            "smithy.api#idempotent": {}
          }
        },
        "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsRequest": {
          "type": "structure",
          "members": {
            "LinuxSubscriptionsDiscovery": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
              "traits": {
                "smithy.api#documentation": "<p>Describes if the discovery of Linux subscriptions is enabled.</p>",
                "smithy.api#required":
{}
              }
            },
            "LinuxSubscriptionsDiscoverySettings": {
              "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
              "traits": {
                "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The
settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated
from.</p>",
                "smithy.api#required": {}
              }
            },
            "AllowUpdate": {
              "target": "smithy.api#Boolean",
              "traits": {
                "smithy.api#documentation": "<p>Describes if updates are allowed to the service settings for Linux
```

```
subscriptions. If you\n      allow updates, you can aggregate Linux subscription data in more than one home Region.</p>"
                }
            }

        }
      },
      "com.amazonaws.licensemanagerlinuxsubscriptions#UpdateServiceSettingsResponse": {
        "type": "structure",
        "members": {
          "LinuxSubscriptionsDiscovery": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscovery",
            "traits": {
              "smithy.api#documentation": "<p>Lists if discovery has been enabled for Linux subscriptions.</p>"
            }
          },
          "LinuxSubscriptionsDiscoverySettings": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#LinuxSubscriptionsDiscoverySettings",
            "traits": {
              "smithy.api#documentation": "<p>The settings defined for Linux subscriptions discovery. The settings include if Organizations\n      integration has been enabled, and which Regions data will be aggregated from.</p>"
            }

    },
          "Status": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#Status",
            "traits": {
              "smithy.api#documentation": "<p>Indicates the status of Linux subscriptions settings being applied.</p>"
            }
          },
          "StatusMessage": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringMap",
            "traits": {
              "smithy.api#documentation": "<p>A message which details the Linux subscriptions service settings current status.</p>"
            }
          },
          "HomeRegions": {
            "target": "com.amazonaws.licensemanagerlinuxsubscriptions#StringList",
            "traits": {
              "smithy.api#documentation": "<p>The Region in which License Manager displays the aggregated data for Linux\n      subscriptions.</p>"
            }
          }
        }
      },
```

```
    "com.amazonaws.licensemanagerlinuxsubscriptions#ValidationException": {
      "type": "structure",
      "members": {
        "message": {
          "target": "smithy.api#String"
        }
      },
      "traits": {
        "smithy.api#documentation": "<p>The provided input is not valid. Try your request again.</p>",
        "smithy.api#error": "client"
      }
    }
  }
}
```


Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,
and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership
of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,

and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial
revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable

by such Contributor that are necessarily infringed by their
Contribution(s) alone or by combination of their Contribution(s)
with the Work to which such Contribution(s) was submitted. If You
institute patent litigation against any entity (including a
cross-claim or counterclaim in a lawsuit) alleging that the Work
or a Contribution incorporated within the Work constitutes direct
or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate
as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute
copies of the
Work or Derivative Works thereof in any medium, with or without
modifications, and in Source or Object form, provided that You
meet the following conditions:

(a) You must give any other recipients of the Work or
Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices
stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works
that You distribute, all copyright, patent, trademark, and
attribution notices from the Source form of the Work,
excluding those notices that do not pertain to any part of
the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its
distribution, then any Derivative Works that You distribute must
include a readable copy of the attribution notices contained
within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
any Contribution intentionally submitted for inclusion in the Work
by You to the Licensor shall be under the terms and conditions of
this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify
the terms of any separate license agreement you may have executed
with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
names, trademarks, service marks, or product names of the Licensor,
except as required for reasonable and customary use in describing the
origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only

on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following
boilerplate notice, with the fields enclosed by brackets "[]"
replaced with your own identifying information. (Don't include
the brackets!) The text should be enclosed in the appropriate
comment syntax for the file format. We also recommend that a
file or class name and description of purpose be included on the
same "printed page" as the copyright notice for easier
identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
AssociateLicense
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
OperationInputValidation
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint
InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization

Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit
ListLicenses
Initialize stack step
spanInitializeStart
InterceptExecution
RegisterServiceMetadata
legacyEndpointContextSetter
SetLogger
spanInitializeEnd
Serialize stack step
spanBuildRequestStart
setOperationInput
ResolveEndpoint

InterceptBeforeSerialization
OperationSerializer
InterceptAfterSerialization
Build stack step
ClientRequestID
ComputeContentLength
SetCredentialSourceMiddleware
UserAgent
AddTimeOffsetMiddleware
RecursionDetection
spanBuildRequestEnd
Finalize stack step
spanRetryLoop
InterceptBeforeRetryLoop
Retry
InterceptAttempt
RetryMetricsHeader
ResolveAuthScheme
GetIdentity
ResolveEndpointV2
disableHTTPS
ComputePayloadHash
setLegacyContextSigningOptions
InterceptBeforeSigning
Signing
InterceptAfterSigning
Deserialize stack step
AddRawResponseToMetadata
ErrorCloseResponseBody
CloseResponseBody
ResponseErrorWrapper
RequestIDRetriever
InterceptAfterDeserialization
OperationDeserializer
InterceptBeforeDeserialization
AddTimeOffsetMiddleware
RecordResponseTiming
RequestResponseLogger
InterceptTransmit

1.145 gettext 0.22.5-r0

1.145.1 Available under license :

@c The GNU Lesser General Public License.
@center Version 2.1, February 1999

@c This file is intended to be included within another document,

@c hence no sectioning command or @node.

@display
Copyright @copyright{} 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence the
version number 2.1.]
@end display

@subheading Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software---to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software---typically
libraries---of the Free
Software Foundation and other authors who decide to use it. You can use
it too, but we suggest you first think carefully about whether this
license or the ordinary General Public License is the better strategy to
use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use,
not price. Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of it
in new free programs; and that you are informed that you can do these
things.

To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights. These restrictions translate to certain responsibilities for
you if you distribute copies of the library
or if you modify it.

For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the recipients all the rights that we gave
you. You must make sure that they, too, receive or can get the source
code. If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them

with the library after making changes to the library and recompiling
it. And you must show them these terms so they know their rights.

 We protect your rights with a two-step method: (1) we copyright the
library, and (2) we offer you this license, which gives you legal
permission to copy, distribute and/or modify the library.

 To protect each distributor, we want to make it very clear that
there is no warranty for the free library. Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation
 will not be affected by problems that might be
introduced by others.

 Finally, software patents pose a constant threat to the existence of
any free program. We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder. Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

 Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License. This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License. We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

 When a program is linked with a library, whether statically or using
a shared library, the combination of the two is legally speaking a
combined work, a derivative
 of the original library. The ordinary
General Public License therefore permits such linking only if the
entire combination fits its criteria of freedom. The Lesser General
Public License permits more lax criteria for linking other code with
the library.

 We call this license the @dfn{Lesser} General Public License because it
does @emph{Less} to protect the user's freedom than the ordinary General
Public License. It also provides other free software developers Less
of an advantage over competing non-free programs. These disadvantages
are the reason we use the ordinary General Public License for many
libraries. However, the Lesser license provides advantages in certain
special circumstances.

 For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it becomes

a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the
 same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

 In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

 Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

 The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a ``work based on the library'' and a ``work that uses the library''. The former
 contains code derived from the library, whereas the latter must be combined with the library in order to run.

@subheading TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

@enumerate 0
@item
This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called ``this License'').  Each licensee is addressed as ``you''.

 A ``library'' means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

 The ``Library'', below, refers to any such software library or work which has been distributed under these terms.  A ``work based on the Library'' means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it,
 either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term ``modification''.)

``Source code'' for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

@item
You may copy and distribute
verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

@item
You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

@enumerate a
@item
The modified work must itself be a software library.

@item
You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

@item
You must
cause the whole of the work to be licensed at no
charge to all third parties under the terms of this License.

@item
If a facility in the modified Library refers to a function or a
table of data to be supplied by an application program that uses
the facility, other than as an argument passed when the facility
is invoked, then you must make a good faith effort to ensure that,
in the event an application does not supply such function or
table, the facility still operates, and performs whatever part of
its purpose remains meaningful.

(For example, a function in a library to compute square roots has
a purpose that is entirely well-defined independent of the
application. Therefore, Subsection 2d requires that any
application-supplied function or table used by this function must
be optional: if the application does not supply it, the square
root function must still compute square roots.)
@end enumerate

These requirements apply to the modified work as a whole. If
identifiable sections
 of that work are not derived from the Library,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Library, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote
it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition, mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this
 License.

@item
You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library. To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License. (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.) Do not make any other change in

these notices.

Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

@item
You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and
2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

@item
A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a ``work that uses the Library''. Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

However, linking a ``work that uses the Library'' with the Library
creates an executable that is a derivative of the Library (because
it
contains portions of the Library), rather than a ``work that uses the
library''. The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

When a ``work that uses the Library'' uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library. The
threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object

file is unrestricted, regardless of whether it is legally a derivative
work. (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

 Otherwise,
 if the work is a derivative of the Library, you may
distribute the object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

@item
As an exception to the Sections above, you may also combine or
link a ``work that uses the Library'' with the Library to produce a
work containing portions of the Library, and distribute that work
under terms of your choice, provided that the terms permit
modification of the work for the customer's own use and reverse
engineering for debugging such modifications.

 You must give prominent notice with each copy of the work that the
Library is used in it and that the Library and its use are covered by
this License. You must supply a copy of this License. If the work
during execution displays copyright notices, you must include the
copyright notice for the Library among them, as well as a reference
directing the user to the copy of
 this License. Also, you must do one
of these things:

@enumerate a
@item
Accompany the work with the complete corresponding
machine-readable source code for the Library including whatever
changes were used in the work (which must be distributed under
Sections 1 and 2 above); and, if the work is an executable linked
with the Library, with the complete machine-readable ``work that
uses the Library'', as object code and/or source code, so that the
user can modify the Library and then relink to produce a modified
executable containing the modified Library. (It is understood
that the user who changes the contents of definitions files in the
Library will not necessarily be able to recompile the application
to use the modified definitions.)

@item
Use a suitable shared library mechanism for linking with the Library. A
suitable mechanism is one that (1) uses at run time a copy of the
library already present on the user's computer system, rather than
copying library functions into the executable,
 and (2) will operate
properly with a modified version of the library, if the user installs

one, as long as the modified version is interface-compatible with the
version that the work was made with.

@item
Accompany the work with a written offer, valid for at
least three years, to give the same user the materials
specified in Subsection 6a, above, for a charge no more
than the cost of performing this distribution.

@item
If distribution of the work is made by offering access to copy
from a designated place, offer equivalent access to copy the above
specified materials from the same place.

@item
Verify that the user has already received a copy of these
materials or that you have already sent this user a copy.
@end enumerate

For an executable, the required form of the ``work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it. However, as a special exception,
the materials to be distributed need not include anything that
is
normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies the
executable.

It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system. Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

@item
You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

@enumerate a
@item
Accompany the combined library with a copy of the same work
based on the Library,

uncombined with any other library
facilities. This must be distributed under the terms of the
Sections above.

@item
Give prominent notice with the combined library of the fact
that part of it is a work based on the Library, and explaining
where to find the accompanying uncombined form of the same work.
@end enumerate

@item
You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License. Any
attempt otherwise to copy, modify, sublicense, link with, or
distribute the Library is void, and will automatically terminate your
rights under this License. However, parties who have received copies,
or rights, from you under this License will not have their licenses
terminated so long as such parties remain in full compliance.

@item
You are not required to accept this License, since you have not
signed it. However, nothing else grants you permission to modify or
distribute the Library or its derivative works. These actions are
prohibited
by law if you do not accept this License. Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

@item
Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions. You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.

@item
If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License,
they do not
excuse you from the conditions of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you

may not distribute the Library at all. For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software
 distribution system which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

@item
If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

@item
The Free Software Foundation
 may publish revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
``any later version'', you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

@item
If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for
 this. Our
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

@center @b{NO WARRANTY}

@item
BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY ``AS IS'' WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

@item
IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE,
 BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.
@end enumerate

@subheading END OF TERMS AND CONDITIONS

@page
@subheading How to Apply These Terms to Your New Libraries

 If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change. You can do so by permitting
redistribution under these terms (or, alternatively, under the terms of the

ordinary General Public License).

To apply these terms, attach the following notices to the library. It is
safest to attach them to the start of each source
file to most effectively
convey the exclusion of warranty; and each file should have at least the
``copyright'' line and a pointer to where the full notice is found.

@smallexample
@var{one line to give the library's name and an idea of what it does.}
Copyright (C) @var{year} @var{name of author}

This library is free software; you can redistribute it and/or modify it
under the terms of the GNU Lesser General Public License as published by
the Free Software Foundation; either version 2.1 of the License, or (at
your option) any later version.

This library is distributed in the hope that it will be useful, but
WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301,
USA.
@end
smallexample

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a ``copyright disclaimer'' for the library, if
necessary. Here is a sample; alter the names:

@smallexample
Yoyodyne, Inc., hereby disclaims all copyright interest in the library
`Frob' (a library for tweaking knobs) written by James Random Hacker.

@var{signature of Ty Coon}, 1 April 1990
Ty Coon, President of Vice
@end smallexample

That's all there is to it!
The libasprintf package is under the LGPL, see file COPYING.LIB.
This subpackage is under the GPL, see file COPYING in the toplevel directory.
@c The GNU General Public License.
@center Version 2, June 1991

@c This file is intended to be included within another document,
@c hence no sectioning command or @node.

@display
Copyright @copyright{} 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
@end display

@heading Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software---to make sure the software is free for all its users. This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.) You can apply it
to
your programs, too.

When we speak of free software, we are referring to freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have. You must make sure that they, too, receive or can get the
source code. And you must show them these terms so they know their
rights.

We protect
your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

@heading TERMS AND
CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

@enumerate 0
@item
This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The ``Program'', below,
refers to any such program or work, and a ``work based on the Program''
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term ``modification''.) Each licensee is addressed as ``you''.

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been
made by running the Program).
Whether that is true depends on what the Program does.

@item
You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

@item
You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

@enumerate a
@item
You must cause the modified files to carry prominent notices
stating
 that you changed the files and the date of any change.

@item
You must cause any work that you distribute or publish, that in
whole or in part contains or is derived from the Program or any
part thereof, to be licensed as a whole at no charge to all third
parties under the terms of this License.

@item
If the modified program normally reads commands interactively
when run, you must cause it, when started running for such
interactive use in the most ordinary way, to print or display an
announcement including an appropriate copyright notice and a
notice that there is no warranty (or else, saying that you provide
a warranty) and that users may redistribute the program under
these conditions, and telling the user how to view a copy of this
License. (Exception: if the Program itself is interactive but
does not normally print such an announcement, your work based on
the Program is not required to print an announcement.)
@end enumerate

These requirements apply to the modified work as
 a whole. If
identifiable sections of that work are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works. But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or

collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring
 the other work under
the scope of this License.

@item
You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

@enumerate a
@item
Accompany it with the complete corresponding machine-readable
source code, which must be distributed under the terms of Sections
1 and 2 above on a medium customarily used for software interchange; or,

@item
Accompany it with a written offer, valid for at least three
years, to give any third party, for a charge no more than your
cost of physically performing source distribution, a complete
machine-readable copy of the corresponding source code, to be
distributed under the terms of Sections 1 and 2 above on a medium
customarily used for software interchange; or,

@item
Accompany it with the information you received as to the offer
to distribute corresponding source code. (This alternative is
allowed only for noncommercial
 distribution and only if you
received the program in object code or executable form with such
an offer, in accord with Subsection b above.)
@end enumerate

The source code for a work means the preferred form of the work for
making modifications to it. For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable. However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering

access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts
 as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

@item
You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License. Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

@item
You are not required to accept this License, since you have not
signed it. However, nothing else grants you permission to modify or
distribute the Program or its derivative works. These actions are
prohibited by law if you do not accept this License. Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions
 for copying, distributing or modifying
the Program or works based on it.

@item
Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions. You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

@item
If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute
 the Program at all. For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to

refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system;
 it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

@item
If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

@item
The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each
 version is given a distinguishing version number. If the Program
specifies a version number of this License which applies to it and ``any
later version'', you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

@item
If you wish to incorporate parts of the Program into other free

programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

@iftex
@heading NO WARRANTY
@end iftex
@ifinfo
@center
 NO WARRANTY

@end ifinfo

@item
BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM ``AS IS'' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

@item
IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO
 LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.
@end enumerate

@iftex
@heading END OF TERMS AND CONDITIONS
@end iftex
@ifinfo
@center END OF TERMS AND CONDITIONS

@end ifinfo

@page
@heading Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the ``copyright'' line and a pointer to where the full notice is found.

@smallexample
@var{one line to give the program's name
and a brief idea of what it does.}
Copyright (C) @var{yyyy} @var{name of author}

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.
@end smallexample

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

@smallexample
Gnomovision version
69, Copyright (C) @var{year} @var{name of author}
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
@end smallexample

The hypothetical commands @samp{show w} and @samp{show c} should show
the appropriate parts of the General Public License. Of course, the
commands you use may be called something other than @samp{show w} and

@samp{show c}; they could even be mouse-clicks or menu items---whatever
suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a ``copyright disclaimer'' for the program, if
necessary. Here is a sample; alter the names:

@example
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

@var{signature of Ty Coon}, 1 April 1989
Ty Coon, President of Vice
@end example

This General
 Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
Except where otherwise noted in the source code (e.g. the files hash.c,
list.c and the trio files, which are covered by a similar licence but
with different Copyright notices) all the files are:

Copyright (C) 1998-2012 Daniel Veillard. All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is fur-
nished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FIT-
NESS FOR A PARTICULAR PURPOSE
 AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors
who decide to use it. You
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations
below.

When we speak of free software, we are referring to freedom of use,
not price. Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights. These restrictions translate to certain responsibilities for
you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library,
whether gratis
or for a fee, you must give the recipients all the rights that we gave
you. You must make sure that they, too, receive or can get the source
code. If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them
with the library after making changes to the library and recompiling
it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.
^L
Finally,
software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore
permits such linking only if the
entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes
a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free

library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

^L

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means

all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation
and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in
any medium, provided that
you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under
the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and
can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms
of the ordinary GNU General Public
License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.
^L
Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form

under the terms of Sections 1 and 2 above provided that you accompany it with the
complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a
"work that uses the
library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute
the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.
^L
6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work

under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will
operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for

reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.
^L
7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
^L
11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License,
they do not
excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution
system which is
implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among

countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.
^L
14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF

SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

^L

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James
Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
The gettext-runtime package is partially under the LGPL and partially under the GPL.

The following parts are under the LGPL, see file intl/COPYING.LIB:
- the libintl and libasprintf libraries and their header files,
- the libintl.jar Java library,
- the GNU.Gettext.dll C# library,
- the gettext.sh shells script function library.

The following parts are under the GPL, see file COPYING in the toplevel directory:
- the _programs_ gettext, ngettext, envsubst,
- the documentation.

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://fsf.org/>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to
freedom, not
price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you

want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1)
assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand
ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not
convey, without conditions so long as your license otherwise remains
in force. You may convey covered works to others for the sole purpose
of having them make modifications exclusively for you, or provide you
with facilities for running those works, provided that you comply with
the terms of this License in conveying all material for which you do
not control copyright. Those thus making or running the covered works
for you must do so exclusively on your behalf, under your direction
and control, on terms that prohibit them from making any copies of
your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under
the conditions stated below. Sublicensing is not allowed;
section 10
makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological
measure under any applicable law fulfilling obligations under article
11 of the WIPO copyright treaty adopted on 20 December 1996, or
similar laws prohibiting or restricting circumvention of such
measures.

When you convey a covered work, you waive any legal power to forbid
circumvention of technological measures to the extent such circumvention
is effected by exercising rights under this License with respect to
the covered work, and you disclaim any intention to limit operation or
modification of the work as a means of enforcing, against the work's
users, your or third parties' legal rights to forbid circumvention of
technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you
receive it, in any medium, provided that you conspicuously and
appropriately
publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any
non-permissive terms added in accord with section 7 apply to the code;
keep intact all notices of the absence of any warranty; and give all
recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey,
and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium

customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation

into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization
keys, or other information required to install
and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in
ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this

License by making exceptions from one or more of its conditions.
Additional permissions that are applicable to the
entire Program shall
be treated as though they were included in this License, to the extent
that they are valid under applicable law. If additional permissions
apply only to part of the Program, that part may be used separately
under those permissions, but the entire Program remains governed by
this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option
remove any additional permissions from that copy, or from any part of
it. (Additional permissions may be written to require their own
removal in certain cases when you modify the work.) You may place
additional permissions on material, added by you to a covered work,
for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you
add to a covered work, you may (if authorized by the copyright holders of
that material) supplement the terms of this License with terms:

a) Disclaiming warranty
or limiting liability differently from the
terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or
author attributions in that material or in the Appropriate Legal
Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or
requiring that modified versions of such material be marked in
reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or
authors of the material; or

e) Declining to grant rights under trademark law for use of some
trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that
material by anyone who conveys the material (or modified versions of
it) with contractual assumptions of liability to the recipient, for
any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further
restrictions" within the meaning of section 10. If the Program as you
received it, or any part of it, contains a notice stating that it is

governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights
granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor

version. For
purposes of this definition, "control" includes the right to grant
patent sublicenses in a manner consistent with the requirements of
this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free
patent license under the contributor's essential patent claims, to
make, use, sell, offer for sale, import and otherwise run, modify and
propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express
agreement or commitment, however denominated, not to enforce a patent
(such as an express permission to practice a patent or covenant not to
sue for patent infringement). To "grant" such a patent license to a
party means to make such an agreement or commitment not to enforce a
patent against the party.

If you convey a covered work, knowingly relying on a patent license,
and the Corresponding Source of the work is not available for anyone
to copy, free of charge and under the terms of this
License, through a
publicly available network server or other readily accessible means,
then you must either (1) cause the Corresponding Source to be so
available, or (2) arrange to deprive yourself of the benefit of the
patent license for this particular work, or (3) arrange, in a manner
consistent with the requirements of this License, to extend the patent
license to downstream recipients. "Knowingly relying" means you have
actual knowledge that, but for the patent license, your conveying the
covered work in a country, or your recipient's use of the covered work
in a country, would infringe one or more identifiable patents in that
country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or
arrangement, you convey, or propagate by procuring conveyance of, a
covered work, and grant a patent license to some of the parties
receiving the covered work authorizing them to use, propagate, modify
or convey a specific copy of the covered
work, then the patent license
you grant is automatically extended to all recipients of the covered
work and works based on it.

A patent license is "discriminatory" if it does not include within
the scope of its coverage, prohibits the exercise of, or is
conditioned on the non-exercise of one or more of the rights that are
specifically granted under this License. You may not convey a covered
work if you are a party to an arrangement with a third party that is
in the business of distributing software, under which you make payment
to the third party based on the extent of your activity of conveying

the work, and under which the third party grants, to any of the
parties who would receive the covered work from you, a discriminatory
patent license (a) in connection with copies of the covered work
conveyed by you (or copies made from those copies), or (b) primarily
for and in connection with specific products or compilations that
contain the covered work, unless you entered into that arrangement,
or
that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting
any implied license or other defenses to infringement that may
otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License. If you cannot convey a
covered work so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you may
not convey it at all. For example, if you agree to terms that obligate you
to collect a royalty for further conveying from those to whom you convey
the Program, the only way you could satisfy both those terms and this
License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public
License.

Notwithstanding any other provision of this License, you have
permission to link or combine any covered work with a work licensed
under version 3 of the GNU Affero General Public License into a single
combined work, and to convey the resulting work. The terms of this
License will continue to apply to the part which is the covered work,
but the special requirements of the GNU Affero General Public License,
section 13, concerning interaction through a network will apply to the
combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of
the GNU General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number. If the
Program specifies that a certain numbered version of the GNU General
Public License "or any later version" applies to it, you

have the
option of following the terms and conditions either of that numbered
version or of any later version published by the Free Software
Foundation. If the Program does not specify a version number of the
GNU General Public License, you may choose any version ever published
by the Free Software Foundation.

If the Program specifies that a proxy can decide which future
versions of the GNU General Public License can be used, that proxy's
public statement of acceptance of a version permanently authorizes you
to choose that version for the Program.

Later license versions may give you additional or different
permissions. However, no additional obligations are imposed on any
author or copyright holder as a result of your choosing to follow a
later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY
APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT
HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS"
WITHOUT WARRANTY
OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO,
THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM
IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF
ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS
THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY
GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE
USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF
DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD
PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS),
EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF
SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided
above cannot be given local legal effect according to their terms,
reviewing courts shall apply local law that most closely approximates
an absolute waiver of all civil liability in connection with the

Program, unless a warranty or assumption of liability accompanies a
copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
state the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where
the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <https://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,

if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<https://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want
to do, use the GNU Lesser General
Public License instead of this License. But first, please read
<https://www.gnu.org/philosophy/why-not-lgpl.html>.

1.146 smithy-go 1.23.0

1.146.1 Available under license :

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

* Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
* Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.

Apache License
Version 2.0, January 2004

http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including

the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this
License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or

Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding
those notices that do not
pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the

origin of the Work and reproducing the
content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
agreed to in writing, Licensor provides the Work (and each
Contributor provides its Contributions) on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
implied, including, without limitation, any warranties or conditions
of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE. You are solely responsible for determining the
appropriateness of using or redistributing the Work and assume any
risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
whether in tort (including negligence), contract, or otherwise,
unless required by applicable law (such as deliberate and grossly
negligent acts) or agreed to in writing, shall any Contributor be
liable to You for damages, including any direct,
indirect, special,
incidental, or consequential damages of any character arising as a
result of this License or out of the use or inability to use the
Work (including but not limited to damages for loss of goodwill,
work stoppage, computer failure or malfunction, or any and all
other commercial damages or losses), even if such Contributor
has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
the Work or Derivative Works thereof, You may choose to offer,
and charge a fee for, acceptance of support, warranty, indemnity,
or other liability obligations and/or rights consistent with this
License. However, in accepting such obligations, You may act only
on Your own behalf and on Your sole responsibility, not on behalf
of any other Contributor, and only if You agree to indemnify,
defend, and hold each Contributor harmless for any liability
incurred by, or claims asserted against, such Contributor by reason
of your accepting any such warranty or additional liability.

1.147 github.com/google/uuid 1.6.0

1.147.1 Available under license :

Paul Borman <borman@google.com>
bmatsuo
shawnps
theory
jboverfelt
dsymonds
cd1

wallclockbuilder
dansouza
Copyright (c) 2009,2014 Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
 OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.148 ca-certificates-bundle 20250619-r0

1.148.1 Available under license :

No license file was found, but licenses were detected in source scan.

#!/usr/bin/env perl
***
*   _   _ ____ _
* Project   ___| | | | _ \| |
*   / __| | | | |_) | |
* | (__| |_| | _ <| |___
*   ___|___/|_| ______|
*
* Copyright (C) Daniel Stenberg, <daniel@haxx.se>, et al.
*
* This software is licensed as described in the file COPYING, which

```
# * you should have received as part of this distribution. The terms
# * are also available at https://curl.se/docs/copyright.html.
# *
# * You may opt to use, copy, modify, merge, publish, distribute and/or sell
# * copies of the Software, and permit persons to whom the Software is
# * furnished to do so, under the terms of the COPYING file.
# *
# * This software is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY
#
 * KIND, either express or implied.
# *
# * SPDX-License-Identifier: curl
# *
# ***************************************************************************
# This Perl script creates a fresh ca-bundle.crt file for use with libcurl.
# It downloads certdata.txt from Mozilla's source tree (see URL below),
# then parses certdata.txt and extracts CA Root Certificates into PEM format.
# These are then processed with the OpenSSL commandline tool to produce the
# final ca-bundle.crt file.
# The script is based on the parse-certs script written by Roland Krikava.
# This Perl script works on almost any platform since its only external
# dependency is the OpenSSL commandline tool for optional text listing.
# Hacked by Guenter Knauf.
#
```

Found in path(s):
* /ca-certificates-20250619-tar-bz2/ca-certificates-20250619/mk-ca-bundle.pl
No license file was found, but licenses were detected in source scan.

```
/* c_rehash.c - Create hash symlinks for certificates
* C implementation based on the original Perl and shell versions
*
* Copyright (c) 2013-2014 Timo Teräs <timo.teras@iki.fi>
* All rights reserved.
*
* This software is licensed under the MIT License.
* Full license available at: http://opensource.org/licenses/MIT
*/
```

Found in path(s):
* /ca-certificates-20250619-tar-bz2/ca-certificates-20250619/c_rehash.c
No license file was found, but licenses were detected in source scan.

```
#
# This Source Code Form is subject to the terms of the Mozilla Public
# License, v. 2.0. If a copy of the MPL was not distributed with this
# file, You can obtain one at http://mozilla.org/MPL/2.0/.
```

Found in path(s):
* /ca-certificates-20250619-tar-bz2/ca-certificates-20250619/certdata.txt

1.149 alpine-base 3.21.4-r0

1.149.1 Available under license :

Contributor: Natanael Copa <ncopa@alpinelinux.org>
Maintainer: Natanael Copa <ncopa@alpinelinux.org>
pkgname=alpine-base
pkgver=3.21.4
pkgrel=0
pkgdesc="Meta package for minimal alpine base"
url="https://alpinelinux.org"
arch="noarch"
license="MIT"
The MIT License

Copyright <YEAR> <COPYRIGHT HOLDER>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the “Software”), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED “AS IS”, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

1.150 libmount 2.40.4-r1

1.150.1 Available under license :

NR START END SECTORS SIZE NAME UUID
1 32 7679 7648 3.7M 8f8378c0-01
2 7680 16383 8704 4.3M 8f8378c0-02
5 7936 12799 4864 2.4M
6 12544 16127 3584 1.8M
GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for
software and other kinds of works.

The licenses for most software and other practical works are designed
to take away your freedom to share and change the works. By contrast,
the GNU General Public License is intended to guarantee your freedom to
share and change all versions of a program--to make sure it remains free
software for all its users. We, the Free Software Foundation, use the
GNU General Public License for most of our software; it applies also to
any other work released this way by its authors. You can apply it to
your programs, too.

When we speak of free software, we are referring to
freedom, not
price. Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
them if you wish), that you receive source code or can get it if you
want it, that you can change the software or use pieces of it in new
free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you
these rights or asking you to surrender the rights. Therefore, you have
certain responsibilities if you distribute copies of the software, or if
you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must pass on to the recipients the same
freedoms that you received. You must make sure that they, too, receive
or can get the source code. And you must show them these terms so they
know their rights.

Developers that use the GNU GPL protect your rights with two steps:
(1)
assert copyright on the software, and (2) offer you this License
giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains
that there is no warranty for this free software. For both users' and
authors' sake, the GPL requires that modified versions be marked as
changed, so that their problems will not be attributed erroneously to
authors of previous versions.

Some devices are designed to deny users access to install or run

modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand
ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees"
and
"recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the

public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy,
is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The
"System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally
available free
programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for

the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is
covered by this License only if the output, given its
content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed;
section 10
makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid

circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately
publish on each copy an appropriate copyright notice;
keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to
"keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the

Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply

if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal

Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or
requiring that modified versions of such material be marked in
reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or
authors of the material; or

e) Declining to grant rights under trademark law for use of some
trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that
material by anyone who conveys the material (or modified versions of
it) with contractual assumptions of liability to the recipient, for
any liability that these contractual assumptions directly impose on

those licensors and authors.

All other non-permissive additional terms are considered "further
restrictions" within the meaning of section 10. If the Program as you
received it, or any part of it, contains a notice stating that it is
governed by this License along with a term that is a further
restriction, you may remove that term. If a license document contains
a further restriction but permits relicensing or conveying under this
License, you may add to a covered work material governed by the terms
of that license document, provided that the further restriction does
not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you
must place, in the relevant source files, a statement of the
additional terms that apply to those files, or a notice indicating
where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the
form of a separately written license, or stated as exceptions;
the above
requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly
provided under this License. Any attempt otherwise to propagate or
modify it is void, and will automatically terminate your rights under
this License (including any patent licenses granted under the third
paragraph of section 11).

However, if you cease all violation of this License, then your

license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright
holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have

actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public

License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF

ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17.
Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of

MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program. If not, see <https://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short
notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU GPL, see
<https://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program
into proprietary programs. If your program is a subroutine library, you
may consider it more useful to permit linking proprietary applications with
the library. If this is what you want
to do, use the GNU Lesser General
Public License instead of this License. But first, please read
<https://www.gnu.org/licenses/why-not-lgpl.html>.
Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice (including the next
paragraph) shall be included in all copies or substantial portions of the
Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,

OUT OF OR IN CONNECTION WITH THE SOFTWARE
OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
notice, and the entire permission notice in its entirety,
including the disclaimer of warranties.
2. Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote
products derived from this software without specific prior
written permission.

THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED
WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF
WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT
OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE
USE OF THIS SOFTWARE, EVEN IF NOT ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.
Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later
version.

The complete text of the license is available in the
../Documentation/licenses/COPYING.LGPL-2.1-or-later file.

/*
* Copyright (c) 1989 The Regents of the University of California.
* All rights reserved.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the above copyright
*   notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following disclaimer in the
*   documentation and/or other materials provided with the distribution.
* 3. All advertising materials mentioning features or use of this software
*   must display the following acknowledgement:
* This product includes software developed by the University of
* California, Berkeley and its contributors.
* 4. Neither the name of the University nor the names of its contributors
*   may be used to endorse or promote products derived from this software
*
 without specific prior written permission.
*
* THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
* SUCH DAMAGE.
*/
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
  list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
  this list of conditions and the following disclaimer in the documentation
  and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL

DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER
CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.

Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which

gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software. If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

Finally, any free program is threatened constantly by software
patents. We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary. To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and
modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License. The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language. (Hereinafter, translation is included without limitation in
the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope. The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the
Program does.

1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot

impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded. In such case, this License incorporates
the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time. Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing
version number. If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE,
THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR
THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU
General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author

Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this
is what you want to do, use the GNU Lesser General
Public License instead of this License.

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who

decide to use it. You
can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library,
whether gratis
or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software
patents pose a constant threat to the existence of
any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser

General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order

to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into
another language. (Hereinafter, translation is
included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium,
provided that
you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy,

and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License.

Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the
object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany
the work with the complete corresponding
machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application

to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate
properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally
distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any

other library
facilities. This must be distributed under the terms of the
Sections above.

b) Give prominent notice with the combined library of the fact
that part of it is a work based on the Library, and explaining
where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License. Any
attempt otherwise to copy, modify, sublicense, link with, or
distribute the Library is void, and will automatically terminate your
rights under this License. However, parties who have received copies,
or rights, from you under this License will not have their licenses
terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not
signed it. However, nothing else grants you permission to modify or
distribute the Library or its derivative works. These actions are
prohibited by law if
you do not accept this License. Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions. You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.

11. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse
you from the conditions of this License. If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all. For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system
 which is
implemented by public license practices. Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

 12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded. In such case, this License incorporates the limitation as if
written in the body of this License.

 13. The Free Software Foundation may publish
 revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation. If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

 14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission. For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this. Our
decision

will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE,
BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change. You can do so by permitting
redistribution under these terms (or, alternatively, under the terms of the
ordinary General Public License).

To apply these terms, attach the following notices to the library. It is
safest to attach them to the start of each source file to most effectively
convey
the exclusion of warranty; and each file should have at least the
"copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or

modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301
USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!
This library is free software; you can redistribute it and/or
modify it under the terms of the Modified BSD License.

The complete text of the license is available in the
../Documentation/licenses/COPYING.BSD-3-Clause file.
BSD 2-Clause License

Copyright (c) 2023, Thorsten Kukuk

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE

IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later
version.

The complete text of the license is available in the
../Documentation/licenses/COPYING.LGPL-2.1-or-later

1.151 zlib 1.3.1-r2

1.151.1 Available under license :

Copyright notice:

(C) 1995-2022 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied
warranty. In no event will the authors be held liable for any damages
arising from the use of this software.

Permission is granted to anyone to use this software for any purpose,
including commercial applications, and to alter it and redistribute it
freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not
   claim that you wrote the original software. If you use this software
   in a product, an acknowledgment in the product documentation would be
   appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be
   misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly Mark Adler
jloup@gzip.org madler@alumni.caltech.edu
Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization
obtaining a copy of the software and accompanying documentation covered by

this license (the "Software") to use, reproduce, display, distribute,
execute, and transmit the Software, and to prepare derivative works of the
Software, and to permit third-parties to whom the Software is furnished to
do so, all subject to the following:

The copyright notices in the Software and this entire statement, including
the above license grant, this restriction and the following disclaimer,
must be included in all copies of the Software, in whole or in part, and
all derivative works of the Software, unless such copies or derivative
works are solely in the form of machine-executable object code generated by
a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT
SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE
FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE,
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER
DEALINGS IN THE SOFTWARE.

1.152 protobuf-go 1.36.8

1.152.1 Available under license :

Copyright (c) 2018 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
  * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
  * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER
OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT

LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

1.153 iputils 20240905-r0

1.153.1 Available under license :

arping: GPL-2.0-or-later
clockdiff: BSD-3-Clause
ping: BSD-3-Clause
tracepath: GPL-2.0-or-later

Files containing license texts are available in Documentation directory.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.

Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which
gives you legal permission to copy,
distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work
are not derived from the Program,
and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein.

You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to

address new problems or concerns.

Each version is given a distinguishing
version number. If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation. If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission. For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this. Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE,
THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR
THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest

possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU
General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this
is what you want to do, use the GNU Lesser General
Public License instead of this License.

1.154 sirupsen-logrus 1.9.3

1.154.1 Available under license :

The MIT License (MIT)

Copyright (c) 2014 Simon Eskildsen

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF
OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries.To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

©2025 Cisco Systems, Inc. All rights reserved.